Abstinence Only Education Program

Fifth Year Evaluation Report

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June 2003

Abstinence until marriage

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Arizona Department of Health Services

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Final Report

Arizona Abstinence Only Education Program

1998–2003

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Arizona Abstinence Only Education Program
1998–2003

The evaluation findings concerning implementation and outcome for the Arizona Abstinence Only Education Program are favorable. Based on the five-year evaluation (1998–2003), the following conclusions are highlighted:

Implementation Findings

- **The Abstinence Only program is a major school initiative implemented broadly to diverse groups.**
  - Over the five years the program served more than 123,000 individuals, most of them teens and preteens. The program has grown each year, serving 32,741 individuals in 2002 compared to 29,378 in 2001, and 22,712 in 2000.
  - Among ethnic groups, Hispanic girls present the greatest risk for teen pregnancy. Over the years Hispanics were increasingly represented among program participants, reaching 46% of preteen and teens by 2002.
  - High-risk adults were served in substance abuse facilities, shelters and jails.
  - The amount of programming focused on parents was relatively small and decreased over the years. Parents were only 1% of the total population served.
- **The program is marked by diversity in program delivery setting, curricula, and supplemental activities.**
  - At the height of implementation the program reached as many as 175 middle and high schools, 42 detention and residential facilities, and 32 community and after-school settings. In 2002, the program was offered in 168 schools, 9 after-school, 10 community, 3 probation, and 43 detention, residential and jail settings.
  - Over the life of the program, 14 different curricula were used. Program contractors created three new curricula and at times used blended versions of two or more curricula to best meet the needs of their target populations.
  - The media campaign had statewide coverage, and unaided recall of the television commercials among youth was over 80%.
- **Satisfaction with the program was high among all participant groups.**
  - Among teens, those most satisfied with the program were sexually experienced youths who planned to stop having sex after having completed the program.
  - While participants were overall very satisfied, a majority of teens and high-risk adults perceived that educators placed too much emphasis on right and wrong.

Outcome Findings

- **The follow-up study shows that virgins had a 95% abstinence success rate, and non-virgins had a 52% abstinence success rate.**

- **For 2001, live birth rates among participants were lower than comparable state rates; some of the difference appears to be attributable to the program.**
  - Subsequent years of data should be examined to determine if this is an isolated or sustained program impact.
- **Over time, attitudes towards abstinence and risk-taking behavior among those entering the program became more favorable; this coincided with increased exposure to abstinence-only education in schools, the community, and the media.**
  - A significant shift toward less risky sexual behaviors occurred among sexually experienced teens from school, after-school, and community programs, including less alcohol and drug use accompanying sex, proportionately fewer reported STDs, greater condom and birth control use, and fewer reported pregnancies.
  - No significant change occurred over the years in the proportion of program participants reporting sexual experience at entry to the program.
- **In order of importance, the three factors significantly influencing the likelihood of choosing abstinence from the end of the program to follow-up were no prior sexual experience, not participating in dating, and increased intentions to abstain, all of which are factors that can be impacted by abstinence-only programming.**
- **The Abstinence Only Education Program positively influenced the risk and protective factors related to the long-term outcomes of pregnancy and sex before marriage.**
  - Significant short-term gains were observed among children, preteens, teens and high-risk adults.
  - Significant changes in short-term outcomes were found regardless of whether program was received in school, after-school, community, detention, or residential settings.
- **Short-term outcomes that were maintained over time were improvement in refusal skills, an increase in teens' personal value exploration, and increased endorsement of the health benefits of abstinence.**
  - Taking an additional abstinence only education class in the follow-up period helped to maintain the gains on three short-term outcomes: attitudes toward abstinence, norms about teen sexuality, and social information seeking. Those who did not take an additional abstinence class showed significant decline.
  - The average scores on birth control attitudes at follow-up returned to pre-test levels.
  - A significant decline in intent to pursue abstinence measured at follow-up can largely be attributed to those who had sex in the post program period and modified their intentions to align with their behavior.

Acknowledgements

It is our pleasure to deliver the final evaluation report on the Arizona Abstinence Only Education Program. Over the past five years we have appreciated the ongoing commitment and cooperation of staff from the Arizona Department of Health Services (ADHS). We would like to acknowledge the continuing support of ADHS team members, including: Jeanette Shea-Ramirez, Chief of the Office for Women and Children's Health; Sheila Sjolander, Section Manager; Dorothy Hastings, Education Unit Manager; Sara Rumann, Health Program Manager; and Antoinette Means, former Program Manager of the Abstinence Only Education Program. We would also like to acknowledge the 17 Arizona Abstinence Only Education Program contractors whose cooperation and efforts in collecting and providing important information for this evaluation were invaluable.

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Executive Summary

This is the fifth and final report on the evaluation of the Arizona Abstinence Only Education Program. The purpose of this report is twofold: 1) to present new findings from data collection activities in the fifth year of program implementation (July 1, 2002 to June 30, 2003) and 2) to review important findings from the preceding four years (1998–2002). Highlights from the prior evaluation reports are included to provide a developmental perspective on the program. New findings from Year 5 evaluation data (Jan 1, 2002 to Dec. 31, 2002) include the results of a follow-up survey administered to teens from four Arizona counties, Year 5 satisfaction data, a one-time stakeholder survey, information on 2001 live births in Arizona from Vital Statistics, and an update on implementation from a survey of program contractors and state-level officials. This report is organized into five parts. Part 1 provides an introduction. Part 2 and Part 3 address the who, what, and where of the program that allow for the findings to be considered in the context of what occurred. Part 4 and Part 5 answer the question "What occurred as a result of the Abstinence Only Education Program?" Part 6 presents process and outcome information on the media campaign.[1] Four supporting appendixes are also included.

The Abstinence Only Education Program

The values and norms communicated to youth by popular culture and modeled by significant adults have left youth to question when and under what circumstances sexual activity is appropriate. The templates for boy/girl relationships have undergone radical change over the past 40 years. The old movie progression of boy meets girl, boy asks girl out on a date, and, at the end of the movie, boy and girl kiss on top of the Ferris wheel has been replaced by a less defined and more ambiguous understanding of opposite sex relationships. The consequences of this shift in sexual norms have been revealed in growing rates of teen pregnancies, births, and sexually transmitted diseases that ushered in the 1990s and are described in greater detail in Part 1 of this report. In response to the problem of teen pregnancy and nonmarital births, Arizona embarked on a multicomponent, community-based Abstinence Only Education Program in May 1998—primarily targeting school children in grades four through 12, and also including parents and other adults at high-risk of nonmarital pregnancy.

Implementation Findings

Implementation findings from the five year evaluation are as follows:

- **The Abstinence Only Education Program was a major school initiative implemented broadly throughout Arizona to diverse groups.**

  Over a five-year period (May 1998 to May 2003) the targeted portion of Arizona's Abstinence Only Education Program reached over 123,000 individuals, most of them preteens and teens. Several program participants have received the program more than once, fulfilling early programmatic objectives that communities and cohorts would be saturated with the abstinence-only message. Over the life of the federal grant, Arizona's Abstinence Only Education Program has grown from 13 contractors providing programming in seven of Arizona's 15 counties in 1998 to as many as 17 contractors covering 18 local program sites in 12 Arizona counties in 2001. Appendix B provides a listing of all program contractors, initial contract dates, and program budgets. In its first year, the targeted program was offered in a total of 39 schools, 30 after-school settings, and 22 live-in or residential settings and at the height of implementation, in its fourth year, reached as many as 175 middle and high schools, 42 detention and residential facilities, and 32 community and after-school locations.[2]

- **Arizona's Abstinence Only Education Program is marked by diversity—in target population, program delivery setting, curricula, and supplemental activities.**

  The flexibility to create diverse programs was considered necessary by the ADHS to respond to the unique needs of communities throughout the state. The major component of the targeted programming across all settings is the delivery of a curriculum over a brief period of time. Most often the program is offered as part of the regular health program in school settings, and less commonly as an elective or in a physical education course. The common message delivered by these curricula was *sexual abstinence until marriage*. Programs differed, however, in their emphasis. Whereas some curricula focused on the consequences of sexually transmitted diseases and on health reasons to abstain from sex, others emphasized refusal skills and communication. Although curricula delivery is the primary service mode, some programs have implemented supplemental activities and services such as signing abstinence pledges and joining abstinence support groups. In some counties, parents are offered workshops in their local community to provide consistency in the information and the values promoted in both home and school. Additional youth programs are offered after school, in community settings, and in group homes and detention centers. High-risk adult populations

are served in residential substance abuse facilities, adult homeless shelters, and jails. This diversity is detailed in Part 3.

- **The media campaign extended the reach of the targeted portion of the program through television, radio, and other non-broadcast forms of advertising, making abstinence-only education in Arizona a truly statewide initiative.**
  In addition to the targeted program component, a statewide media campaign was launched to promote the abstinence-only message to parents and school-age children. The statewide media campaign is detailed in Part 6. Media campaign highlights follow Part 6 and Appendix D describes in detail the television and radio ads.

- **State-level administrators and program contractors creatively met implementation challenges.**
  The politically charged nature of abstinence, its newness as an approach to the problem of teen pregnancy and nonmarital births, and the limited experience of many of the program contractors in the abstinence area made implementation particularly challenging in the early stages. Part 2 provides tested strategies for building community support, participant recruitment and retention, contractor reimbursement, staff recruitment and retention, evaluation, classroom management, adapting curricula to local needs, addressing transportation needs, and coalition building. The lessons learned in meeting the nine challenges to program implementation are important in terms of future abstinence programming.

- **The overall satisfaction with the program among all participant groups indicates that program contractors were successful in implementing a program sensitive to all participants.**
  Previous literature questioned whether or not an abstinence-only approach could be all encompassing, i.e., sensitive to those who have experienced sexual intercourse on a voluntary or involuntary basis. Information on satisfaction with the program from all groups—children, preteens, teens, parents, high-risk adults, school stakeholders, and program contractors—attests to the successful implementation of the program. Part 5 presents greater detail on participant and stakeholder satisfaction.

Program Impact Findings

The question all program stakeholders want to answer through evaluation is: "Was the program successful in motivating participants to choose abstinence?" Although a comparison or control group is needed to fully comment on the question of effectiveness, barriers to implementing this type of design prevented its use. To assess the evidence on program impact, three methods were used: a follow-up study, a vital statistics comparison, and an examination of pre-program trends in attitudes toward abstinence and sexual behaviors. Results from these three methods are highlighted below.

- **Program participants who were virgins at the completion of the program had a 95% abstinence success rate at follow-up; their sexually experienced counterparts had a 52% abstinence success rate.**

  A follow-up study of 737 unmarried teen program participants from four counties examined self-reported sexual behavior, ranging from three to 13 months post participation. At the completion of the initial program, 13.5% of the teens were sexually experienced; this increased to 18.5% at the end of the follow-up period. In the absence of a comparison sample, or published findings from similar programs serving similar groups of teens, it is difficult to judge the merit of these successes. The findings are consistent with the literature that suggests abstinence-only programs work best for sexually inexperienced youths.

- **For 2001, live birth rates among program participants were lower than comparable state rates; some of the difference appears to be attributable to the program.**

  Birth certificate data from Vital Statistics for 2001 permitted the comparison of live birth rates of Year 2 female program participants age 15 to 18 years and their age mate counterparts in the state of Arizona. The state live birth rates of *non-program* participants were consistently higher than those of the program participants: the state rate was 19% higher for 18 year olds, 15% higher for 17 year olds, 22% higher for 16 year olds, and 11% higher for 15 year olds. Factors that may have contributed to underestimation of the number of births in the sample of program participants include errors in recording names and birth dates and due to attrition (when program participants move out of state so that births are not recorded in Arizona). Selection bias, i.e., the equivalence of the groups in ways that might impact pregnancy and birth, was examined and population differences appear likely to counterbalance one another. Because this data

represents only participants in Year 2, the comparison of live birth rates should be followed over the next few years to determine if this is an isolated or sustained impact.

- **Over time, attitudes toward abstinence and risk-taking behavior among those entering the program have become more favorable, and this has coincided with increased exposure to abstinence-only programming.**

  Indications exist of more favorable pre-program attitudes toward abstinence and an increased awareness of health reasons to abstain sexually for all teens, regardless of program location. With regard to sexual activity, there has been no change in the proportion of teens coming into the program sexually experienced; this holds true for school, after-school, and community programs as it does for teens with high-risk sexual behaviors served in probation, residential, and detention centers. There has been a significant shift toward less risky sexual behaviors among sexually experienced school, after-school, and community teens, i.e., less alcohol and drug use accompanying sex, proportionately fewer teens reporting diagnosis of STDs, greater condom and birth control use, and fewer reported pregnancies. A similar trend toward less risky sexual behaviors was not observed for probation, residential, and detention center teens.

- **Factors significantly increasing the likelihood of choosing abstinence over time are virginity, not participating in dating, and increased intentions to abstain.**

  The availability of follow-up data on teen sexual behavior has allowed the examination of the factors that influence the likelihood of abstaining from sex in the post-program period. The good news for program stakeholders is that the three factors identified as significant are reasonable targets for change, rather than unchangeable characteristics such as age, ethnicity, and gender, or factors outside the realm of program influence such as family structure, religiosity, and income status. The program should be able to positively impact adolescent sexual behavior to the extent that it can impact the three key factors through 1) intervening early to prevent sexual intercourse; 2) delaying early and frequent dating behavior, increasing monitoring by adults, and encouraging alternative pro-social activities; and 3) influencing intentions to abstain.

- **The Abstinence Only Education Program positively influenced the risk and protective factors related to the long term outcomes of pregnancy and sex before marriage.**

  Success is demonstrated by significant gains in short-term outcomes in a direction consistent with the program's message. Significant short-term gains have been observed among children, preteens, teens, and high-risk adults and these gains

have been demonstrated to be reliable. Significant changes on short-term outcomes were found regardless of whether the program was received in school, after-school, and community locations or in conjunction with probation, detention, and residential treatment.

- **Short-term outcomes that were maintained at follow-up include improvement in refusal skills, an increase in teens' personal value exploration, and increased endorsement of the health benefits of abstinence.**

  If the short-term outcomes are to impact sexual behavior, as the literature suggests, then it is important to determine if the gains attributed to the program are maintained over time rather than lost shortly after the program ends. At least one study of an abstinence-only program reported that short-term gains disappeared after three months.[3] The follow-up study of teens allowed for the assessment of short-term outcomes three to 13 months post-program. In addition to the three short-term outcomes that were maintained, taking a subsequent abstinence class had a maintenance effect for three outcomes that otherwise showed significant decline: attitudes about abstinence, norms about teen sexuality, and social information seeking. Two of the eight short-term outcomes examined, birth control attitudes and intent to pursue abstinence, showed significant decline from post-test to follow-up. The average scores on birth control attitudes at follow-up returned to pretest levels. The decline in scores on intent to abstain can largely be attributed to those having sex post program who bring their intentions in line with their behavior. Subsequent abstinence education between post-test and follow-up did not influence the decline in attitudes toward birth control or intentions to abstain.

Recommendations

The recommendations presented here are based on 1) a synthesis of findings from the five-year evaluation and 2) research and theory on adolescent sexual behavior. Recommendations specific to each part of the report are included in the first pages of each section. Overall recommendations are as follows:

1. Early intervention is important to prevent the first occurrence of sexual intercourse.

Our findings, and the findings of other researchers, have told us in many ways and repeatedly (short-term outcomes and sexual behavior) that nonvirgins are at much greater risk. Virgins had greater changes on short-term outcomes with increased intentions to abstain, and were less likely to initiate sex after having the program. This implies that the abstinence-only message is likely to have a greater impact on youth in grades seven through 10 where fewer of the teens have initiated sexual intercourse. This is also an age range where there is little disagreement among adults (even those who do not support the concept of abstinence until marriage) that postponing sexual activity is a healthy choice.

2. Prevention programs should be designed based on what is known about the factors that influence adolescent sexual behavior as revealed in theory and research.

Researchers who study the prevention of delinquent behaviors have recognized that school-based programs work best when they coexist with community-based and family-based programs, when they target at-risk students, and when they strive for early prevention.[4] The program, as it is currently implemented, focuses primarily on the individual, touching on the psychological and cognitive domains related to adolescent sex. This limited focus excludes several relevant risk and protective domains. For instance, school-related protective factors, are a well established domain of influence on adolescent sexual behavior that is not currently addressed, or emphasized to any great extent, in the program. The Seattle Social Development Project, although not initially designed to impact sexual behavior positively impacted a range of sexual risk behaviors based on follow-up of students at ages 18 and 21. Given in grades one through six, it was designed to promote strong bonds to family and school. It included intervention with teachers, students, and student's parents and contained no "sex education" at all. In contrast, self-esteem, which is a popular target of many programs addressing children and teens, has not been linked to preventing adolescent sexual activity in the literature, and should not be a target of abstinence programs. Appendix C presents a summary of the literature on risk and protective factors related to adolescent sex.

3. Increased attention needs to be given to parents in assisting them with the sexual education of their children including helping parents articulate pro-abstinence values and expectations for their children in a clear and direct manner.

It is time for the programs to move beyond parent/child communication and address issues of parenting style and parental monitoring. Parents are in the best position to understand their own child's developmental needs and to reinforce consistent messages about abstinence and responsible sexual behavior. Research has shown that an authoritative parenting style, one that holds children accountable and sets firm and consistent expectations, is more likely to be successful at preventing youth risk behaviors than indulgent or neglectful approaches. Parental monitoring has been shown to be fundamental in decreasing a wide range of risk behaviors including sex. Finally, parents need help understanding how and why divorce and single parenthood impacts adolescent sexual behavior. The program could help unmarried parents resolve the conflict they feel when they hold one expectation for themselves and a different expectation for their children with regard to sex outside of marriage. The structure of future programming should include incentives for creative ideas that would involve parents on a variety of levels. Part 2 of the report provides specific recommendations for improving the recruitment and retention of parents.

4. Programs should specifically address dating relationships and dating expectations with youth and parents.

Despite abstinence-related knowledge and skills, dating presents a significant risk for a range of sexual behaviors up to and including intercourse. Teens who considered themselves as having a girlfriend or boyfriend at follow-up were more likely to have sex post-program. Parental expectations and parental monitoring can play a significant role in shaping expectations of youth around dating.

5. While the program was clear that its goal was sex within marriage, the presentation of this message was often perceived as moralistic. Change to an approach that aims to develop moral reasoning skills is recommended.

Over the first four years of programming some 83% of teens and 64% of high-risk adults reported a perception that the Abstinence Only Education Program teachers talked too much about what was right and wrong. Programs that present the message in a fashion that cultivates skills and practice are more likely to be effective than programs that are perceived as saying, "Do this because it is right." The educational approach should interweave the cognitive (thinking), affective (feeling), and behavioral (doing) in ways that are perceived to benefit both the self and others. Reasoning based on principles of justice or fairness as opposed to the

promotion of a rule-oriented reasoning (i.e., do what I say or equating morality with conforming to a set of "right" rules) has been demonstrated to be effective in preparing youth for the moral dilemmas they encounter. The topic of sex presents young people with a tremendous opportunity for developing their moral reasoning skills. The classroom setting presents an ideal setting for the advancement of moral reasoning because the necessary conditions are present, i.e., students are likely to be at different stages of moral reasoning, social interaction is part of normal classroom activity, and opinions are naturally divergent. When a skilled teacher provides a nonjudgmental climate combined with the ability to promote reasoning at adjacent stages the optimal setting for growth in ability to reason beyond a rule-based orientation exists. This applies to a variety of risk behaviors.

6. Some sites were more successful than others in building and maintaining coalitions. Factors related to successful coalition building should be identified and promoted.

Preventing adolescents from engaging in sexual behavior requires more than an individual and family approach, it requires a coalition of many partners. There is no question that any attempt to reduce nonmarital births in Arizona will be enhanced by collaboration with multiple community partners. In the early stages of program implementation, coalition building was difficult. Conditions are now much more favorable for successful coalition building and collaboration.[5] For instance, the program has established abstinence-only educators as legitimate voices in the community and over the five years of the program they have gained expertise. Movement at a national level in the public health community has included an increased acceptance of the importance of abstinence as a legitimate and appropriate choice for risk avoidance. This is seen in both statements by the American Academy of Pediatrics and the Centers for Disease Control. These conditions present a favorable political and social climate for growing successful collaborations with others who are interested in addressing the problem of adolescent pregnancy as well as collaboration with a variety of others who are addressing adolescent risk behaviors.

Part 1. Introduction

Every social program is designed in response to a problem. Abstinence-only education is a national initiative to respond to the problems[6] of nonmarital birth and sexually transmitted disease. The rates of sexual activity among nonmarital youth have increased dramatically since the 1950s, with corresponding increases in nonmarital pregnancy and birth.[7, 8] The cost of this problem to society is staggering. In 1997 it was estimated that teenage childbearing cost taxpayers $6.9 billion annually, accounted for in welfare and food stamp benefits, medical care expenses, lost tax revenue, and additional incarceration and foster care expenses.[9] Attention to abstinence has grown from a concern that family planning services established under federal legislation in the 1970s had failed to curb nonmarital and teen births (see Figure 1.1).[10] Congress took further action in 1981 and passed the Adolescent Family Life Act (AFLA), which allowed the Office of Adolescent Pregnancy Programs (OAPP) to establish primary prevention projects designed to promote abstinence from sexual activity until marriage.[11] As a result of the AFLA, numerous programs were developed and implemented in the 1980s and 1990s in the nation's middle and high schools. Some of these programs discussed abstinence, as well as the use of contraceptives, as a means to prevent unintended pregnancy, while other programs focused on abstinence only. As the problem of births by nonmarital girls peaked in 1994, criticism was raised that programs providing information on contraception inadvertently encouraged sexual activity.[12]

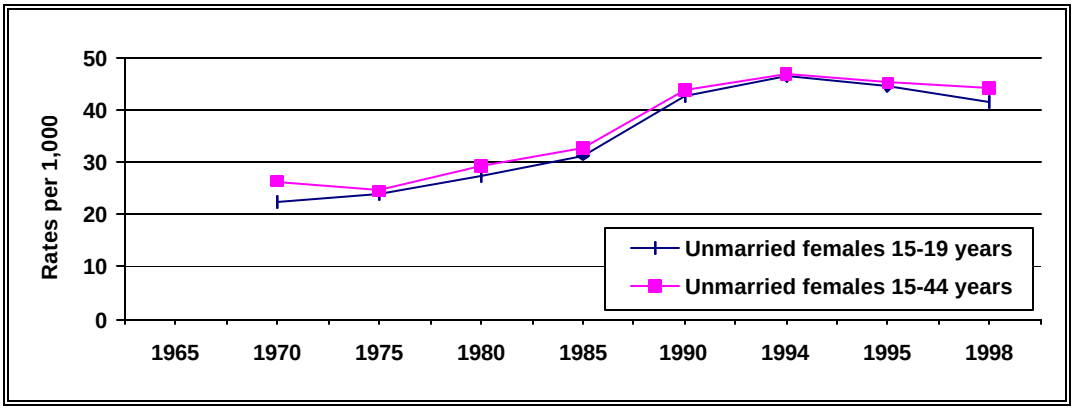
Promising to "end welfare as we know it" in 1996, the federal government allocated $50 million for each of five fiscal years for a new formula grant program to the states to provide abstinence-only education [PL 104-193, Section 510(b)]. Abstinence-only education programs do not teach adolescents how to use contraceptives or where to obtain them; however, most do discuss the failure rates of contraception. The goal of the 1996 abstinence-only legislation was to promote abstinence from sexual activity until marriage and, thereby, reduce out-of-wedlock births.[13]

In the middle to late 1990s teen birth rates finally began to decline across all states. Birth rates among nonmarital women in their twenties, however, have remained more or less constant throughout the 1990s.[14] Studies have been done to determine what factors may be responsible for the reduction in teen birth rates with the intention of continuing the downward trend. Two peer review articles have attempted to evaluate the factors driving the decline in pregnancy rates and birth rates. Kaufmann *et al.* (1998) suggest the decline in teen pregnancy rates is largely due to a decrease in the

proportion of teen women who are sexually experienced and sexually active, as well as a similar decrease among teen boys. These authors report that although an increase in contraceptive use at first intercourse may have played some role in the decline, contraceptive methods used by teens have not changed from 1988 to 1995 and, furthermore, sexually active teen girls tend to use contraception inconsistently.[15] Mohn *et al.* (2003) agree that among the factors making the greatest contribution to the decline in overall birth rates among 15 to 19 year olds is an increase in abstinence among teens; they estimate that abstinence accounted for 67% of the decline in teen birth rates from 1991 to 1995.[16]

One factor that is not responsible for the decline in teen birth rates is abortion. Abortion rates have steadily declined among teens and nonmarital women of all ages since the 1970s.[17] In 1997, the abortion rate was 28 per 1,000 females age 15 to 19 years, down 33% from a decade earlier.[18] Among nonmarital women in general, abortion rates decreased from 161 per 100 live births in 1975 to 65.9 abortions per 100 live births in 1997.[19]

Figure 1.1 Trends in U. S. birth rates for nonmarital women by age



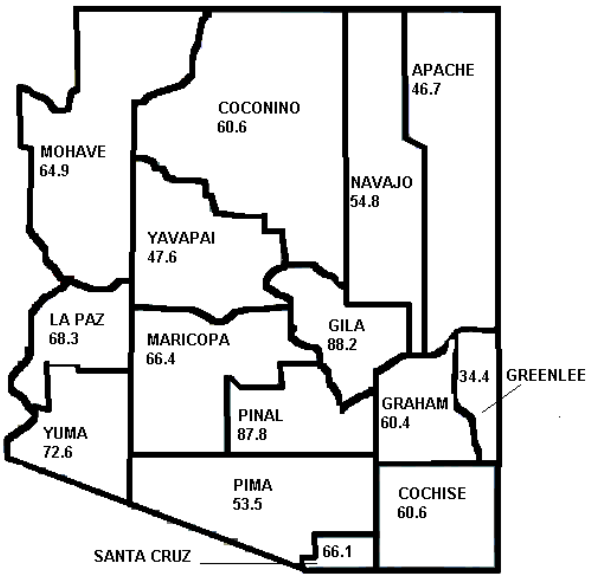
Source: Pastor, P. N., Makuc, D. M., Reuben, C., & Xia, H. (2000, August). Chartbook on trends in the health of Americans: Health, United States 2000. Hyattsville, MD: National Center for Health Statistics.

Arizona Comparisons

Although all U.S. states have experienced a decline in teen birth rates in the 1990s, there is substantial rate variation among states. In 2000, birth rates ranged from 23.4 per 1,000 girls age 15 to 19 years in New Hampshire to 72 per 1,000 in Mississippi.[20] Arizona ranked third highest among states in teen birth rates in 1991, and fourth highest in 2000. Since 1998, Arizona birth rates per 1,000 females age 15 to 19 years have steadily declined, from 73.9 to 63.3 per 1,000 in 2001.[21]

The variability in teen birth rates among states parallels the variability found within states. For instance, teen birth rates ranged from 34.4 per 1,000 females age 15 to 19 years in Greenlee County to 88.2 per 1,000 in Gila County in 2001. Figure 1.2 presents 2001 teen birth rates for Arizona by county.

Figure 1.2 Teen birth rates per 1,000 females 15 to 19 years of age in 2001

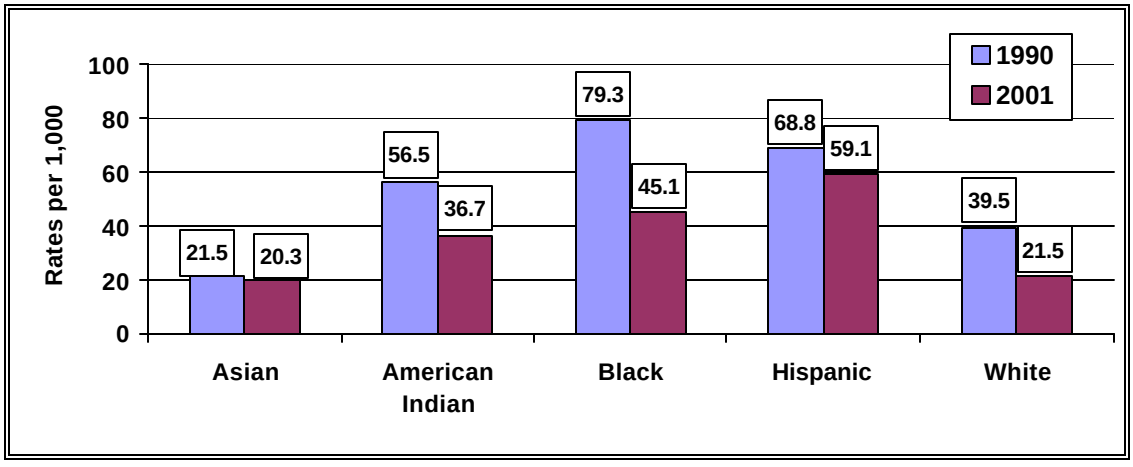


Source: www.hs.state.az.us/plan/teen01/pdf/t10b.pdf

Variation by Race and Ethnicity

Teen birth rates also vary by race and ethnicity. Some 33% of Arizona teen girls are Hispanic, yet Hispanic girls accounted for 54% of teen pregnancies and 56% of live births to teens in 2001. In contrast, 53% of white non-Hispanic teen girls accounted for 31% of teen pregnancies and 29% of live births to teens. The proportional contribution to teen pregnancy (15%) and live births (15%) from girls of all other races in Arizona is about equal to their proportion of the young female population (14%).[22] Figure 1.3 presents a comparison of pregnancy rates by ethnicity and race among females aged 19 and younger in Arizona for 1990 and 2001. The table shows that 1) the decline in teen pregnancy from 1990 to 2001 has been the smallest among Hispanics, and 2) teen pregnancy rates for Hispanics, blacks, and American Indians remain much higher than the rates for whites and Asians.

Figure 1.3 Arizona pregnancy rates by race/ethnicity for females age 19 and younger—a comparison of 1990 and 2001



Source: www.hs.state.az.us/plan/teen01/text2001.pdf

Abstinence Only Education in Arizona

Given the magnitude of its teen pregnancy problem, Arizona has a particular interest in delaying adolescent sexual activity until marriage. Under the leadership of the Arizona Department of Health Services (ADHS), Arizona was successful in its bid for federal funds to implement Abstinence Only Education programming. Additional state funds in the amount of $2 million were secured from the Arizona Department of Economic Security (ADES) Welfare Reform Block grant, with a commitment of $2.5 million per year throughout the remaining years of the demonstration. Federal funds under the program were released to the states in the spring of 1998.

In May 1998, Arizona embarked on a multi-component, community-based Abstinence Only education program—primarily targeting school children in grades four through 12, and also including parents and other adults at high-risk of nonmarital pregnancy. In addition to the targeted program components, a statewide media campaign was launched to promote the Abstinence Only message to parents and school-age children. Over the life of the federal grant, Arizona's Abstinence Only Education Program has grown from 13 contractors located in seven of Arizona's 15 counties in 1998, to 17 contractors covering 12 counties in 2001. Figure 1.4 (page 1-6) shows the locations of program contractor headquarters throughout the state.

County Served	Headquarters	Program Contractor
COCHISE	Sierra Vista	Child & Family Resources (Sierra Vista)
COCONINO	Flagstaff	Northern AZ University
	Tuba City	Tuba City Regional Healthcare Corporation
GILA	Globe	Gila County Cooperative Extension
MARICOPA	Phoenix	ASU Community Health Services
		Mountain Park Health Center
		St. Joseph's Hospital
		Passion & Principles of AZ, Inc.
		Catholic Social Service (Maricopa County)
MOHAVE & LA PAZ	Bullhead City	West Care AZ
NAVAJO	Flagstaff	Arizona Psychology Services
PIMA	Tucson	Pima Youth Partnership
		Pima Prevention Partnership
		Child & Family Resources (Tucson)
PINAL	Coolidge	Pinal County Division of Public Health
SANTA CRUZ	Nogales	Child & Family Resources (Nogales)
YAVAPAI	Prescott	Catholic Social Service (Yavapai County)
YUMA	Somerton	Border Health Foundation Puentes de Amistad

Over a five-year period the targeted portion of Arizona's Abstinence Only Education Program has reached more than 123,000 children and adults, surpassing all expectations. In its first year of implementation, the program was offered in a total of 39 schools, 30 after-school settings, and 22 live-in or residential settings. At its height of implementation in year 4, the program was offered in 175 middle and high schools, 42 detention and residential facilities, and 32 community and after-school locations. In year 5 the program was offered in a total of 168 schools, 22 community and after-school settings, and 43 detention and residential settings. Several of the program's recipients have had the program more than once, fulfilling early programmatic objectives that communities and cohort would be saturated with the abstinence message.

Diversity in Programming

Arizona's Abstinence Only Education Program is marked by diversity—in target population, program delivery setting, curricula, and supplemental activities. The flexibility to create diverse programs was considered necessary by ADHS to respond to the unique needs of individuals throughout the state. The major component of the targeted programming across all settings is the delivery of a curriculum over a brief period of time. Most often the program is offered as part of the regular health program in school settings, and less commonly as electives or in physical education courses. The common message delivered by these curricula was sexual abstinence until marriage. Programs differed, however, in their emphasis. Whereas some curricula focused on the consequences of sexually transmitted diseases and health reasons to abstain from sex, others emphasized refusal skills and communication. Although curricula delivery is the primary service mode, some programs have implemented supplemental activities and services such as signing abstinence pledges and joining abstinence support groups. In some counties parents are offered workshops in their local community to provide consistency in the information and the values promoted in both home and school. Additional youth programs are offered after school, in community settings, and in group homes and detention centers. High-risk adult populations are served in residential substance abuse facilities, adult homeless shelters, and jails.

The Evaluation

The State of Arizona set aside monies in each of the five fiscal years to provide for a comprehensive process and impact evaluation of the Abstinence Only Education

Program. LeCroy & Milligan Associates, Inc., a Tucson-based evaluation firm was awarded the five-year contract. The evaluation by LeCroy & Milligan Associates, Inc. centers on two main questions: 1) How did the program promote the message of abstinence until marriage as the healthiest and most viable lifestyle choice? and 2) Was the program successful in motivating participants to choose abstinence until marriage?[23] In considering these questions, the evaluation has examined curriculum, program delivery, participant characteristics and changes in intentions, attitudes and behaviors.

Organization of this Report

This is the fifth and final report on the evaluation of the Arizona Abstinence Only Education Program. The purpose of this report is twofold: 1) to present new findings from the fifth year of program implementation (July 1, 2002 to June 30, 2003), and 2) to review important findings from the preceding four years (1999–2002). The report is organized into the following evaluative components: Part 2 and Part 3 address the process study portion of the evaluation, i.e., the who, what, and where of the program, which allows for the outcome findings to be considered in the context of what occurred; Part 4 and Part 5 answer the question "What occurred as a result of the Abstinence Only Education Program?" and Part 6 presents process and outcome information on the media campaign.[24] Each part of this report has a similar format, including an initial summary of the chapter findings and associated recommendations followed by a more detailed presentation of the results. Four appendixes, A through D, provide supporting information.

Part 2. Program Implementation

Part 2 of this report documents implementation of the Abstinence Only Education Program and describes the experience of the program contractors receiving abstinence-only education funding in the targeted programs from inception in 1998 through fiscal year 2003. The major question addressed in this chapter is: "*How did the program promote the message of abstinence until marriage as the healthiest and most viable lifestyle choice?*" The data sources used to answer this question include four focus group interviews with program educators from five program sites in Year 2[25], program documents, individual interviews with local and state-level staff, on-site program observations, staff questionnaires over the five years of program implementation, and a telephone survey of program contractors conducted in April 2003.

Summary

Program implementation is summarized as follows:

- **A total of 17 program contractors were awarded contracts to deliver abstinence-only programming during the five years.**
  After two initial rounds of program proposal submissions, 16 program contractors were awarded contracts between May 1998 and March 1999. Seven of these program contractors had previous experience delivering abstinence or abstinence-only programming. Five program sites were already part of existing coalitions to prevent teen pregnancy and six program sites were part of abstinence-only coalitions. A seventeenth program contractor was added in March 2000. Over the past five years, annual contract awards have ranged from a minimum of $35,993 to a maximum of $311,840.
- **The Abstinence Only Education Program was delivered by a diversity of full- and part-time program staff.**
  Program educators include regular teachers as well as nurses, counselors, and teens. Education levels ranged from attending high-school (teen leaders) to Master's or professional degrees. About half of the educators received formal curriculum training, while the other half learned through a more informal process that included, for instance, supervisory sessions and class observations.

- **The majority of program contractors served teen and preteen populations (grades 6 through 12).**
  Some also served children in grades 4 and 5 and adult populations, including parents and high-risk adults.

- **Programs were delivered in diverse school and community settings**.
  Although the majority of program participants were served in school and after-school/community settings, some program contractors delivered their curricula to youths in group-homes and detention and residential settings. High-risk adults were served in residential facilities, adult homeless shelters and jails.

- **Over the life of the program, 14 different curricula were used.**
  Program contractors were responsible for selecting their curricula and making the necessary changes to comply with federal requirements before submitting them for approval to the ADHS. Program contractors created three new curricula and sometimes used blended versions of two or more curricula to best meet the needs of their target populations.

- **Nine major challenges to successful program implementation were identified and creatively addressed over the past five years of program delivery.**
  The nine challenges were 1) community support, 2) participant recruitment and retention, 3) the ADHS payment structure, 4) staff recruitment and retention, 5) the evaluation, 6) classroom management, 7) adapting curricula to local needs, 8) transportation, and 9)coalition building.

Recommendations

These recommendations have been derived from the experiences of the Abstinence Only Education Program administrators and program contractor staff in implementing the program over the five years. The recommendations encompass important lessons learned and should be considered in ongoing or future implementation of abstinence-only programming. Recommendations are as follows:

- **Significant time should be devoted to continued marketing efforts among school stakeholders and parents to build awareness of the abstinence message and to help program**

contractors better understand the culture of local communities. Establishing community support from the start is key to program implementation and can help ensure program longevity. The dissemination of community-specific evaluation findings regarding prior abstinence-only or similar programming can be used as a strategic tool for marketing the program.

- **Maintain and expand local and state-level collaborations with other agencies or coalitions that share similar interests to enhance support for the programs.**
  Collaborations can be helpful in program implementation, fund-raising and program design. Collaborations are especially critical in the early stages of building community support and marketing the program.

- **Utilize supplemental activities to complement the curricular portion of the program.**
  In general, the addition of curriculum-plus activities has been useful and should be considered in the context of strengthening or complementing a school-taught curriculum. Particular attention to these activities should be given when selecting a curriculum with a heavy emphasis on lecture and discussion over more hands-on activities such as games and roleplay.

- **Continue to examine and select curricula to meet the needs of each target population served.**
  Tailoring curricula to the target populations in terms of both developmental and cultural aspects is essential to successful program implementation, particularly when serving a diversity of age and ethnic groups. Two common examples of this process are 1) selecting a curriculum adapted to program participants' reading and comprehension levels and 2) choosing bilingual curriculum materials.

- **Provide relevant and up-to-date information as well as an explicit message and clear definition of abstinence to the target population.**
  This should be considered in the early stages of program implementation, during the process of adapting and tailoring curricula. ADHS formalized the definition of abstinence for all programs in Year 4. All programs are expected to adopt the following definition of abstinence: To voluntary choose to not do something. When referring to sex, it means voluntarily choosing not to engage in sexual activity until marriage. Sexual activity is defined as any type of genital contact or

sexual stimulation including, but not limited to, vaginal, oral, or anal intercourse or mutual masturbation.

- **Continue to develop and implement a sustained and multifaceted strategy for parent recruitment and retention**.
  Tested strategies and additional suggestions include:

  - Define the target parent group in terms of age, gender, ethnicity, language, education, etc. This will help to identify the desired characteristics of recruiters based on the principles of authority, liking, and similarity.
  - Use existing networks for recruitment; for instance, some contractors have enlisted the support of churches in their attempts to recruit parents, others have recruited at parent meetings within the schools.
  - Explore new program implementation approaches that better fit parents' work schedules and natural social networks, such as implementing a lunchtime series at the workplace and targeting more downtown locations. One program contractor implemented a brown bag lunchtime workshop at a local department store.
  - Market the program as something positive, i.e., building healthy adolescents.
  - Contractors have attempted to select convenient facilities and provide additional resources where possible, such as child care, transportation, snacks, dinner, and other incentives. Some contractors have reduced the time commitment from five hours to two. Sessions have been offered on weekends and evenings.
  - Acknowledge parents as experts on their own life experience; empower them.
  - Employ cultural- and gender-specific techniques.
  - Share information at the outset on the skills of the educator, perceived effectiveness of the program, and the role of the parent.
  - Develop supportive relationships with parents through demonstration of understanding, empathy, encouragement of trial and error learning, and use of a non-punitive and non-confrontational approach in parent education.
  - Contractors have used a range of supportive materials as recruitment and retention incentives, such as published tips on how to talk to kids about sex, contact information, magnets, stress balls, mugs, and parent survival bags.

The Call for Proposals

In their proposals, prospective grantees were required to address the overall project goals and how their program would meet them through their service objectives. Each proposal provided a matrix that cross-referenced the curriculum concepts and/or components with the abstinence-only federal priorities (see Appendix A). The matrix later became part of the grantee's contract. A team of ADHS personnel, community representatives, and interested state officials reviewed the proposals. Proposals were rated on experience, expertise, reliability, qualification, cost, and methodology. The selection criteria strongly emphasized community involvement.

Contract Awards

After two rounds of program proposal submissions, 16 program contractors were awarded contracts. Thirteen contracts were awarded in May 1998 and an additional three in March 1999. A final program contractor, Tuba City Regional Healthcare Corporation, was signed in March 2000. The 17 program contractors represented a mix of public, non-profit and private, and for-profit community-based organizations with a health or social service focus. Only three, however, had prior experience delivering abstinence-only programming. Once a contract with the ADHS was signed, the program contractor had 60 days to select a curriculum, create an education plan, and prepare for program implementation. Appendix B lists program contractors by county, initial contract award dates, and contracted amount.

State-level Coordination and Support

The Abstinence Only Education Program is a program housed in the Office of Women's and Children's Health (OWCH), Bureau of Community and Family Health Services, of the Arizona Department of Health Services (ADHS). High-level administrative leaders had multiple funding, economic and program challenges vying for their attention throughout ADHS during the five years of the program. During the last two years staffing at the OWCH for the Abstinence Only Education Program was 1.5 full-time equivalent positions. Much of the momentum in the program was generated and sustained by the relationships among administrative staff of the OWCH and the contracted providers. At the program's initiation, teams of OWCH staff traveled to each county to present the Abstinence Only Education Program initiative to local health departments. A strong emphasis in the design of the initiative was to encourage local adaptation of the program to respond to unique

community needs. State staff implemented quarterly program contractor meetings throughout the life of the program to provide in-service training, updates, and a venue for problem-solving implementation issues. During the second, third and fourth years, state staff convened a youth and parent advisory council to provide input into the federal grant application and the media campaign messages.

Coalition Building

Coalition building occurred at both the state and local levels. Prior to the Abstinence Only Education Program initiative, major efforts in the OWCH were focused on family planning and prevention initiatives rather than on a risk avoidance approach such as abstinence. Although strong support for taking on the risk avoidance approach existed, challenges to growing and maintaining broad-based and visible support remained. Tension existed regarding the mission of the Abstinence Only Education Program; this resulted in some perceived isolation of the program within the Department and the public health community. For example, those agencies promoting comprehensive sex education did not support the abstinence-only approach and so limited contact occurred there. Relationships formed with the Adolescent Health Coalition, the Arizona Department of Education (ADE), the Arizona Coalition on Teen Pregnancy Prevention, and the Arizona Department of Economic Security (DES). Little attention or controversy appeared at the legislative-level, with the exception of the efforts of one or two highly supportive state legislators.

At the local level, the ADHS required program contractors to either join or form collaborations, coalitions, or partnerships with other organizations trying to achieve similar goals. These coalitions and collaborations were to support the program contractors in areas such as public relations, identifying other funding sources, advising on program direction, and providing space for program activities. Five program sites were already part of existing coalitions to prevent teen pregnancy and six program sites were part of abstinence-only coalitions. Local efforts in forming partnerships and collaborations were most effective in the first years of program implementation. During the last two years many coalition-building efforts have decreased and some coalitions are no longer functioning.

Funding

In Year 1, contract awards ranged from a minimum of $52,098 to a maximum of $265,219. The highest contract amount ($311,840) was awarded in Year 5. (See Appendix B for a more complete description of contract amounts and award dates.) Over the five years of programming, some programs' budgets grew significantly, some stayed relatively even, and others' decreased. For the first four years, the payment system for program contractors was based on a fixed unit price. Program contractors were paid when they provided the ADHS with documentation demonstrating that they had met a unit as outlined in their contract, e.g., five teens for five hours. It was felt that the unit cost rate would be an incentive for actively recruiting classes and schools. The smallest unit of service that could be used by program contractors was five participants for five hours of program delivery. The program contractors were required to meet their minimum number of participants per unit to get paid. For the smallest unit of service, i.e., five participants for five hours, 100% attendance was required. Attendance requirements were lower for longer programs. Participants had to be the same individuals over the course of the program. In the first year the ADHS amended the majority of the program contracts to allow program contractors to reduce their unit of service descriptions. In the final year of program implementation the payment system was changed to a cost reimbursement process. Program contractors under this system submit monthly reimbursement invoices for itemized expenditures, such as salaries and travel. To make sure that the contractors met their goals, the contracts included a payback clause that outlined a program contractor's unit or units of service. If a program contractor did not meet their specified units and had been paid more than the specified value of the completed units, then the program contractor had to pay back the ADHS based on what was not completed. According to state-level administrators, the cost reimbursement system appeared to be more cost effective and easier for program contractors to manage.

Program Staff

Most program contractors have a combination of full- and part-time staff. Staff positions include a program manager or coordinator and program educators. The total number of paid staff per program site ranged from two to seven in the first year. A great diversity of educators delivered the Abstinence Only Education Program. For example, ASU Community Health Services employed nurse educators

to deliver the program in a substance abuse residential facility; Arizona Psychology Services employed counselors; and two sites, Gila County Cooperative Extension and BHF Puentes de Amistad, utilized teen educators, the majority of whom were volunteer high school students. A survey of the adult educators in Year 1 found that the majority were women (74%) ranging in age from 18 to 62 years. Fifty-five percent were white, 20% were Hispanic, 12% were black, and the remaining 13% were Native American or Asian. Most were single and never married (62%), slightly over 20% were married, and the remaining educators were divorced or widowed. As for the highest level of education completed, about one-half had a high school diploma, 34% had a Bachelor's degree, and 14% had a Master's degree or other professional degree. The teen educators had a more even balance of males and females (59% and 41% respectively) and greater cultural diversity, with the largest portion (45%) being Hispanic. Teen educators ranged in age from 15 to 19 years and all were still in high school. About half of the educators received formal training; the other half learned on the job and through trial and error. Educator characteristics that program contractors report to be effective are 1) an ability to create personal relationships with students based on trust and an interest in the student's welfare, 2) an ability to listen and be respectful, 3) an ability to read non-verbal communication and have the flexibility to substitute other material and activities when students are not responding, and 4) good organization skills.

Target Populations

The majority of program participants were preteens and teens ages 12 to 18 years, but several program contractors served younger children, high-risk adults, and parents. As shown in Table 2.1, of the 18 local program sites, five targeted young children, all but one targeted preteens and teens, nine addressed parents, and three provided programming for high-risk adults. The target populations served by program contractors varied from year to year as some program contractors only began in Year 2 and others added or stopped serving certain target groups over time.

Table 2.1 Target populations by county and program contractor

County	Program Contractor	Target Populations				
		Children	Preteen	Teen	Adult	Parent
Cochise	Child & Family Resources (Sierra Vista)	√	√	√		
Coconino	Northern AZ University		√ Y2	√ Y2		
	Tuba City Regional Healthcare Corporation		√ Y2	√ Y2		
Gila	Gila County Cooperative Extension		√	√		√
Maricopa	ASU Community Health Services				√	
	Catholic Social Service (Maricopa County)	√ Added Year 2	√	√		√
	Mountain Park Health Center		√	√		
	Passion & Principles of AZ, Inc.		√ Added Year 2	√		
	St. Joseph's Hospital		√	√		
Mohave & La Paz	West Care AZ	√ Y2	√ Y2	√ Y2	√ Y2	√ Y2
Navajo	Arizona Psychology Services		√	√		√
Pima	Child & Family Resources (Tucson)		√	√		
	Pima Prevention Partnership		√	√	√	√
	Pima Youth Partnership	√	√	√		√
Pinal	Pinal County Division of Public Health		√	√ Added Year 2		
Santa Cruz	Child & Family Resources (Nogales)	√	√	√		
Yavapai	Catholic Social Service (Yavapai County)		√	√		√
Yuma	Border Health Foundation Puentes de Amistad		√	√		√

Note: West Care AZ, Northern AZ University and Tuba City Regional Healthcare Corporation were contracted or began prog ramming in Year 2 (Y2). Gila County Cooperative Extension did not offer the program in fiscal year 2003.

Program Delivery Settings

Over the past five years of program delivery, the majority of program contractors (about 84%) delivered the program in schools during school hours. In schools, the program was offered as part of the regular health education programming or as an extra curricular topic. Overall, however, the variation in program delivery settings was immense. Settings included after-school programs on school property or at community-based facilities, such as a youth center or church; residential treatment

centers; juvenile detention centers; and group homes. High-risk adults were served in substance abuse facilities, adult homeless shelters and jails. As summarized in Table 2.2, many of the program contractors delivered the program across multiple settings.

Table 2.2 Program delivery settings for youths and adults by program contractor

Program Contractor	Program Delivery Settings				
	School	After-School/ Community	Detention Center	Residential Treatment/ Jail/ Shelter	Group Home
Child & Family Resources (Sierra Vista) Arizona Psychology Services	√				
ASU Community Health Services				√	
Northern AZ University		√			
Child & Family Resources (Nogales)	√		√		
Border Health Foundation Puentes de Amistad St. Joseph's Hospital Pinal County Division of Public Health Mountain Park Health Center Child & Family Resources (Tucson) Tuba City Regional Healthcare Corporation Gila County Cooperative Extension	√	√			
Catholic Social Service (Yavapai County)	√	√		√	
West Care AZ	√	√	√	√	
Passion & Principles of AZ, Inc.	√	√	√		
Catholic Social Service (Maricopa County) Pima Prevention Partnership Pima Youth Partnership	√	√	√	√	√

Curricula

The abstinence curricula were the core of service provision at each site. Program contractors were responsible for selecting their particular curricula and the ADHS reviewed each curriculum selection to determine if it was in compliance with the standards set forth in the Request For Proposals (RFP). This was a lengthy process that first required program contractors to select a curriculum, modify it based on the federal requirements, and submit it for approval. ADHS staff approved the curriculum, requested additional changes, or rejected the curriculum selection that then necessitated that the program contractor to continue their search for an

appropriate curriculum. In the second round of the RFP process, the ADHS provided an approved curricula list. In Year 2, the ADHS approved a new curriculum titled *WAIT Training* and sponsored a two-day workshop on this curriculum in both Phoenix and Tucson. The *WAIT Training* curriculum was adopted because it provided a more hands-on approach that educators felt had potential to keep students engaged. *WAIT Training* is readily adapted to different settings and time constraints, which made it particularly appealing to program contractors.

Over the life of the program, 14 different curricula have been used with the different participant groups. Local program contractors created three of the 14 curricula: Child & Family Resources developed *Girl Talk/Guy Talk*, Passion & Principles of AZ, Inc. created *Passion and Principles*, and the ASU College of Nursing developed *Healthy Relationships* (based on FACTS) for the high-risk adult population. The other 11 curricula were available in the public domain. In the first years, most program contractors reported major programmatic changes in an attempt to tailor curriculum content and activities, both developmentally and culturally, to their target populations. Some program contractors felt the need to develop a blended version of two or more mainstream curricula to best meet their students' needs. In years 4 and 5, in contrast to previous years, only a few program contractors indicated that they made changes to their curriculum content or to the number of sessions they offered. Table 2.3 provides a summary of the different curricula used by each program contractor in the final year of programming.

Table 2.3 Curricula used by program contractors in Year 5

County	Program Contractor	Curricula
Cochise	Child & Family Resources (Sierra Vista)	Sex Can Wait Managing Pressures Before Marriage Choosing the Best Path Choosing the Best Life A.C. Green "Game Plan"
Coconino	Northern AZ University	A.C. Green "I've Got the Power"
	Tuba City Regional Healthcare Corporation	Sex Can Wait
Gila	Gila County Cooperative Extension *	WAIT Training
Maricopa	ASU Community Health Services	Healthy Relationships (FACTS based)
	Catholic Social Service (Maricopa County)	Managing Pressures Before Marriage Choosing the Best Path Choosing the Best Life Choosing the Best Way
	Mountain Park Health Center	Sex Can Wait
	Passion & Principles of AZ, Inc.	Passion and Principles Abstinence Only Program
	St. Joseph's Hospital	A.C. Green "I've Got the Power"
Mohave & La Paz	West Care AZ	Sex Can Wait Managing Pressures Before Marriage WAIT Training WAIT and Managing Pressures Before Marriage (blended curriculum)
Navajo	Arizona Psychology Services	FACTS A.C. Green "I've Got the Power" WAIT Training
Pima	Child & Family Resources (Tucson)	Girl Talk/Guy Talk
	Pima Prevention Partnership	A.C. Green "I've Got the Power" Plain Talk (Parent) Creative Writing Workshop WAIT Training Choosing the Best Path Choosing the Best Life Choosing the Best Way WAIT and Managing Pressures Before Marriage (blended curriculum)
	Pima Youth Partnership	Sex Can Wait Managing Pressures Before Marriage WAIT Training
Pinal	Pinal County Division of Public Health	Sex Can Wait WAIT Training Sex Can Wait and WAIT Training (blended curriculum)

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County	Program Contractor	Curricula
Santa Cruz	Child & Family Resources (Nogales)	Sex Can Wait Managing Pressures Before Marriage Choosing the Best Path Choosing the Best Life Choosing the Best Way A.C. Green "Game Plan"
Yavapai	Catholic Social Service (Yavapai County)	Managing Pressures Before Marriage Guys & Dolls Creative Writing Workshop Choosing the Best Path Choosing the Best Life Choosing the Best Way WAIT Training A.C. Green "Game Plan"
Yuma	Border Health Foundation Puentes de Amistad	A.C. Green "I've Got the Power" Managing Pressures Before Marriage WAIT Training
Note: Gila County Cooperative Extension did not provide the program in fiscal year 2003.		

Additional Services and Activities

Six of the 17 program contractors in Year 1 and seven in Year 2 were classified as offering curriculum-plus programs. In Year 5, seven sites were still providing curriculum-plus programs. Program sites classified as curriculum-plus offer other services and activities in addition to the curriculum such as abstinence clubs, support groups, teen mazes, youth development groups, summer camps, theater and drama groups, writing workshops, art contests, counseling, peer/mentor training, information booths at public events, and abstinence awareness days or weeks. The most common reason sited by program contractors for not providing such additional activities was lack of funding.

Lessons Learned in Program Implementation

Nine challenges to successful program implementation were identified and addressed over the course of program delivery. Each challenge is listed below, along with a description of how the ADHS and the program contractors responded to it. The limited experience of many program contractors in the abstinence area made it particularly challenging for them to be prepared for some of the difficulties they encountered in the early stages of implementation. The responses to these challenges, therefore, represent important lessons learned in program

implementation and should be considered in any future expansion or replication of the program.

1. Community support was gained by sustained and targeted communication to school administrators, teachers, parents and community leaders. The problems in garnering support for the Abstinence Only Education Program were parallel at the state and local levels. The politically charged nature of abstinence-only education and the relative newness of this approach sometimes materialized in skepticism and distrust. For instance, some community members associated the Abstinence Only Education Program with sex education, some were skeptical that the abstinence-only concept would be exclusively taught, some felt strongly about the exclusion of contraceptive information or the inclusion of contraception with a focus on its failure rate, and others expressed concern that the program educators might proselytize because of the affiliation of the abstinence message with faith-based organizations. Instead of viewing the Abstinence Only Education Program as another option in the prevention of teen pregnancy and STDs, community members often viewed it as competing with already existing sex education and similar prevention programs. These tensions presented an added challenge in garnering needed community support to successfully implement the program. Over the five years of the program, school and community support was perceived to have increased dramatically and useful strategies for increasing support were learned:

- Allow time and resources for outreach activities. Program contractors reported it taking as long as six months before buy-in by schools was achieved.
- Articulate how the program is relevant to specific community needs.
- Gain teacher support (described by several program contractors as key to gaining entry to a school) and show gratitude for their support (e.g., program staff developed incentives or gifts for teachers, such as school supplies, books, etc.).
- Maintain personal contact with stakeholders, such as school officials, teachers, and parents.
- Plan ahead for program scheduling.
- Develop a good reputation to assist future marketing and referrals.
- Use satisfied stakeholders, e.g., school teachers and administrators, as advocates for the program.

- Utilize anonymous site-level evaluation information (e.g., demographic profiles, satisfaction data, and risk behavior data) to document need and participant responses.
- Use community leaders and civic groups to promote the program.
- Be persistent in recruitment efforts.

2. Participant recruitment and retention strategies must be carefully tailored to youth, adults, and parents because there are many activities and demands competing for their time. In the first two years of program implementation, many program contractors felt it was difficult to recruit and retain participants. In contrast, some program contractors now report waiting lists and face more demand than they can satisfy at current staff and funding levels. Some program contractors report that they no longer need market the curricula as extensively because the program is well received. Some recruitment and retention barriers remain, however, especially for certain target groups such as parents and high-risk adults. Program contractors have struggled with the dilemma of how to structure the program to fit with adults' schedules, for example, trying to determine whether one full-day session or several shorter evening sessions works better. Certain program topics such as parent-child communication about sex were also a deterrent for some parents who were embarrassed or reluctant to discuss such issues. Although youth recruitment and retention is considered successful, children of migrant parents remain an ongoing retention challenge. The major lessons learned regarding recruitment and retention of program participants are:

- The most frequently mentioned barrier to the recruitment of school children in Year 1 was the return of the parent permission form; by signing the permission form a parent actively gives consent for their child or children to attend the program. Although this procedure was required by the ADHS both to ensure that parents understood the program and to verify participants, a passive permission process was approved in May 1999 for schools that requested it. Passive permission requires that the parent oppose program participation, by signing the permission form; by not signing the form, the parent grants passive permission for their child or children to attend the program. Although active consent has remained the primary consent method, seven program contractors were using passive consent in Year 5. The passive consent process has reportedly increased enrollment numbers.

- The majority of program contractors stressed face-to-face contact with stakeholders, follow-up phone calls, and effective timing as essential to recruitment. Program staff successfully engaged teachers in an effort to get students to return their consent forms. Frequent meetings and reminders to probation officers reportedly increased referrals of juveniles on probation.
- Incentives to students have been used to increase retention. Most sites have used promotional materials developed by Cooley Advertising over the past years of programming (e.g., pens, candy, key chains, t-shirts) and a few program contractors also reported providing certificates upon completion of the program. Program contractors reported that the biggest barrier to the use of incentives is funding.
- Activities in schools, such as studying for AIMS testing and sex education, were viewed as competing with the abstinence program. For school programs, mainstreaming the program content into the regular curricula is considered important.
- After-school abstinence programs compete with activities such as sports practices, games, and employment; this highlights the importance of program length and timing.
- One program contractor changed their eligibility criteria for high-risk adults to one month of sobriety in an effort to improve retention.
- Although targeting parents is still a major unresolved challenge for some program contractors, specific strategies have been identified to help increase parents retention in the program. These include use of substantial incentives, such as child care; targeting more convenient locations; and working with small group classes.

3. State-level responsiveness to examine and modify contractual requirements helped program contractors succeed. During the four first years of the program the program contractors established their units of service and were paid when they provided proof of having met a unit as outlined in their contract. For example, if a program contracted to maintain a group size of 15 participants but retained only 10 by the end of the course, they were not paid. Program contractors felt this system was too complicated, sometimes unfair, and created a system that rewarded volume rather than retention and quality. In addition, programs that extended over a longer

period, e.g., 18 weeks versus five weeks, did not receive payment until the entire course was completed. Payment lag time was viewed as an impediment to recruiting and retaining educators. These challenges were met with two strategies:

- In Year 1 the ADHS renegotiated the minimum number of participants with some program contractors to bring contracts in line with experiences in recruitment.
- In Year 5 the funding process was changed from a fixed unit price method to a cost reimbursement system with a payback clause that outlined units of service. This appeared to be more useful for both program contractors and the ADHS and is also more financially conservative.

4. Staff recruitment and retention has been improved through staff training, better wages, and seeking diversity in staff. Significant program educator turnover was an issue for several program contractors in the first years of program delivery. In general, program contractors continue to report being understaffed for the demand they face, for the most part due to funding constraints. Major lessons have been learned to help maximize recruitment and retention of educators:

- In the last two years a majority of program contractors reported they were able to pay better wages and had more money with which to hire additional staff; this led to more stability among paid staff.
- Hiring staff with previous teaching and classroom management experience is an important consideration in retaining competent staff and can also reduce burnout.
- One program contractor reported targeting fraternities and traditionally male academic departments to recruit male staff.
- Some program contractors have continuously expressed the need to recruit a more ethnically diverse staff and have hired more bilingual educators. This has proven to be a key factor in developing and sustaining a respectful and healthy rapport between staff and program participants.
- Although educator turnover remains an issue, program contractors have adapted to it by developing a comprehensive training program.

5. Resistance to the evaluation decreased as evaluators responded to parent concerns, made evaluation data available, and incorporated feedback. School officials and parents were initially reluctant to have children answer questions about sexual activity and pregnancy on the student surveys, and to have their names tracked in the ADHS Vital Records database for live births. Some parents would have preferred an anonymous evaluation form. Sometimes whole communities were described as sensitive to evaluation in general and the potential uses of evaluation information. Resistance to the evaluation decreased over time and lessons learned in dealing with this challenge were:

- Include evaluation contractor staff in a variety of parent and school board information sessions as a means to support program contractors in explaining the use of, need for, and implementation of the evaluation.
- Stress the voluntary nature of the survey, i.e., students can participate in the program and voluntarily opt out of the survey.
- The outcome survey was revised in the second year of program implementation to incorporate much of the feedback received by program contractors: this made the outcome survey shorter and more readable.
- Pay special attention to the use of language such as "we want to survey youth." Such language was considered detrimental to implementation efforts. The language used to foster acceptance of the evaluation should focus instead on the need for evaluating the program.
- Stress the positive uses of the evaluation information for the program contractors. Despite the sensitive nature of the survey items, most program contractors have been aware of the importance and need to collect comprehensive data on sexual attitudes, skills, and behaviors as a means of effectively measuring change. Although some program contractors would like to have more site-specific evaluation findings to report to their community, a majority of program contractors have been able to make efficient use of the evaluation descriptive data and findings presented in evaluation reports or at program contractor meetings.
- Assist program contractors in using descriptive and program satisfaction data as tools to promote the program and increase acceptance within the community.

- Many program contractors have stressed the importance and value of having their staff directly trained and assisted by the evaluation team in regards to data collection. Spending significant training time with educators in charge of administering the survey has been an important factor in data collection.
- Spanish translations of all evaluation instruments were perceived as very useful and essential to reaching some participants, although some program contractors expressed a concern with the reading level of the surveys.

6. Managing difficult student behaviors required attention to the structure of the classroom, working with the regular teacher, and implementing innovative teaching strategies to gain student interest and cooperation. The program educators reported that the education process can be challenging and that student response to the material is not consistently positive. Disruptive and talkative students take away from delivery, discussion, and practice time. The factors educators reported as contributing to classroom problems were large class sizes, participant refusal to engage in classroom activities, physical design of the classrooms, and the absence of the regular teacher in their class. Most disciplinary efforts were described as being carried out by the regular teachers or other adults who were responsible for the students. While other adults were sometimes considered helpful to managing the classroom, others were described as a hindrance. The major lessons learned by program contractors in terms of classroom management are summarized as follows:

- Other adults were sometimes helpful in explaining the purpose of the program before its start, preparing students for a guest teacher, confronting or disciplining disruptive students, or helping to make the educator aware of other events that could affect students' receptivity to the program. Having two educators in the classroom has also been mentioned as a more effective strategy for classroom management, however most sites could not afford this within current funding levels.
- Establishing mutual ground rules and expectations in written form at the beginning has proven valuable because it gives educators and students clear and tangible disciplinary guidelines.
- In general, many educators have observed that a non-judgmental and rather laid-back teaching style has worked best with students, particularly when dealing with

the moral issues and aspects of the abstinence message. As Kirby pointed out in his research on programs to reduce teen pregnancy, avoiding being "preachy" is an essential part of teaching and conveying this type of message among youth.[26]

- Maintaining an atmosphere of respect for students and teachers was the most commonly mentioned criteria for a productive classroom. Personal stories were generally discouraged; some educators recommended limited and respectful disclosure.
- Providing relevant and contemporary information to which the target audience can directly relate can help capture and maintain program participants' attention and gain their buy-in (for both youth and high-risk adults). Again, Kirby as well as Mann et al.[27] have stressed the importance of this aspect of program implementation.
- Multiple fun activities, like videos or games, are helpful in encouraging participation in a positive way and in maintaining the students' attention.
- Plan for ways to respond to students' reports of sexual abuse or harassment before they arise.
- Although most educators were mixed on whether or not the program should be taught in a single-sex or coed format, several program contractors reported that splitting the class by gender had not been helpful in terms of classroom management and attention issues.
- Incentives were regarded as major contributions toward garnering students' attention; in contrast, asking the students to complete worksheets was described as counter productive.

7. Program educators needed to adapt curricula to make it relevant to different target groups. Program educators have modified the curricula to better meet students' needs, e.g., making it more appropriate for certain groups or trying to make it more fun and interesting in an effort to better engage students. The most commonly cited reasons educators felt compelled to make curricular changes were student immaturity and lack of interest. Another reason for making changes was to better address the students' developmental levels; curricular materials were frequently perceived as too advanced or technical for younger students and too basic for those who were already sexually active. For instance, older teens and sexually experienced

teens needed different content than preteens. The ADHS requirement of a participant's attendance at five hours of programming as a prerequisite for program contractors to receive reimbursement also led to curricular modifications. For example, some program contractors condensed curricula designed for five separate one-hour lessons into one five-hour day of class time. Finally, a general lack of time, equipment malfunctions, and a shortage of classroom space also forced many unintended changes in program delivery. Program contractors have used a diversity of strategies to tailor their curricula to different target groups, including:

- Many educators reported the need to make the vocabulary and language in lessons easier to understand. Certain topics were removed from the lessons either because of problems with comprehension or at the request of teachers and principals.
- Adapting materials to increase cultural sensitivity was a necessity for many sites. No curriculum was available in Spanish and some sites used a translate-as-you-go approach for Spanish-speaking participants. The videos typically did not include Hispanic youths. Information was added to make the material culturally sensitive, including, for example, a discussion of Native American child-rearing practices. Other material was removed if it was considered culturally offensive.
- At least two program contractors reported soliciting feedback directly from students on ways to change the program. Several activities were added to the curricula, including role-play, games, STD slides, and creative writing exercises. One-to-one interactions were also seen as useful and the use of a question box in which students could place written questions that would be answered in the next meeting was used as a strategy.
- The use of videos received mixed support. Some videos were described as helpful and interesting while others were described as out of date and out of touch. In general, the importance of up-to-date information presented in a language and style to which teens can relate was cited as the best strategy for capturing participants' attention.
- Students were reported to be more receptive to information perceived as real or that applied to their lives. Culturally relevant examples were described as particularly helpful. Students responded with interest to the topics of life goals and aspirations, taking pride in their culture, and how to develop healthy personal boundaries and relationships.

- Despite all the changes made to adapt the curricula to their target populations, establishing and maintaining a clear and consistent definition of sexual abstinence until marriage has been an important factor in communicating a clear message to program participants while ensuring program fidelity and complying with federal objectives.

8. Transportation can be a barrier to program implementation, particularly in rural areas. Although transportation has not been a problem for most program contractors, it was viewed as a barrier to implementation, especially in rural areas of the state. Urban sites have consistently reported that transportation was not an issue when dealing with school-based target populations, however, a few reported occasional transportation problems in relation to after-school components and arising due to inadequate bus schedules or lack of transportation funding. Parents have been used to assist in transportation in some sites. Also, some contractors took steps to recruit staff who could guarantee that they owned a working vehicle; the ability of staff to provide their own transportation is a crucial element to program delivery even for urban sites when numerous school locations are served.

9. Coalitions can be difficult to sustain, given the diverse views about the abstinence only message. A focus on the common goal of reducing teen pregnancy can build bridges with diverse groups. As many program contractors have experienced, collaborating with other agencies or coalitions that address abstinence programming, or broader sexual education topics, was a tremendous resource for refining and tailoring curricula and also provided problem-solving and other support. Sharing ideas and materials about program content, activities, and delivery settings also saved time and provided cost efficiency in the early stages of program implementation. Some coalitions have flourished over the life of the program; others are no longer functioning. Although many of the program contractors had long-term relationships in their home communities, the politically charged nature of the abstinence-only message sometimes segregated program contractors politically and overshadowed common goals such as reducing teen pregnancy and STDs. Consultation on coalition building was provided by ADHS in years 2 and 3. The literature on successful collaborations suggests that conditions are currently more favorable.[28]

Part 3. Program Participation

Part 3 of this report presents information on the individuals who received Abstinence Only Education programming over five years, from 1998 through the end of December 2002. Demographic characteristics of each participant group are presented with a discussion of significant shifts and trends across time. Information on attendance and conclusions from the dropout analysis are presented. Data sources for the information presented include the pre- and post-surveys administered to participants as well as the attendance forms and monthly reports that contractors generated during the course of the Abstinence Only Education Program.

Summary

Program participation is summarized as follows:

- **Program contractors have demonstrated success in their recruitment efforts.**
  From program inception in 1998 through December 31, 2002 approximately 108,387 children, youths, parents and high-risk adults were enrolled in the Abstinence Only Education Program (this number includes some repeat counting of individuals with multiple program exposures). An additional 15,003 individuals were served from January 2003 through the end of May 2003. The program has increased enrollment on an annual basis of in-school preteens and teens and high-risk adults. The percentage of preteens and teens that had received sex education classes when they entered the program remained fairly stable over the program duration. However, a significant increase occurred in the percentage of those who upon entering the program had already received the abstinence-only education: from 30% in Year 1 to 48% in Year 4.

- **Some 32,741 participants were served in calendar year 2002; the majority of whom were school-based teens (59%) and preteens (31%).**
  Other populations served were children (3%), preteens and teens in after-school, community and other settings (7%), parents (< 1%), and high-risk adults (2%). Fewer demographic and behavioral questions were asked of program participants in Year 5 than in previous years of the evaluation.

- **Although the majority of participants were in Maricopa and Pima counties, participants from western and southeastern Arizona were well represented.**

  An examination of the distribution of program participants by contractor location showed that the majority of enrolled participants were in Maricopa (35%) and Pima (17%) counties. Relatively large proportions of enrollees relative to population base were found in western Arizona counties (Mohave, 8% and Yuma, 9%) and southeastern Arizona counties (Cochise, 8% and Santa Cruz, 6%).

- **A few major changes appeared in the demographic profile of the different population groups.**

  The child, preteen, and teen populations saw a significant increase in Hispanic youths. Consistent with this aspect has been the relatively high percentage of preteen and teens who speak Spanish, either primarily or equally with English: from 22% to 28% in any year. The high-risk adult group has been the most demographically consistent; it comprises largely white males in their mid 30s. The parent group, although remaining primarily female, has become more diverse in terms of ethnicity, marital status, employment, teen parent experience, and religiosity.

- **There was no significant pattern of change over the years in the proportion of teen program participants reporting sexual experience at entry to the program.**

  The proportion of teen participants from school, after-school and community settings who were sexually experienced at entry to the program was consistently around 20%. The proportion of probation, residential and detention center teens with sexual experience at entry to the program was about four times that of their teen counterparts, and varied from a low of 70% to a high of 84%.

- **Sexually experienced school, community, and after-school teen program participants reported safer sex-related behaviors over time.**

  Of those with sexual experience, proportionally fewer individuals over the years reported diagnoses of sexually transmitted diseases (STDs), less alcohol and drug use associated with sex, greater use of condoms and birth control pills, and lower rates of pregnancy.

- **The probation, residential, and detention teen population was sizable, numbering 1,534 in Year 5, and represents an extremely high-risk group with regard to sexual behavior.**

Of these teens, 50% and higher have had four or more lifetime sexual partners, those diagnosed with a prior STD ranged from 27% to 41%, and about half reported using alcohol or drugs at last sexual intercourse. Compared to their teen counterparts, the probation, residential, and detention population reported much lower condom and birth control use and the rate of pregnancy, or responsibility for pregnancies among males, was much higher, ranging from 26% to 33%.

- **Program contractors were overall very successful at increasing participant attendance.**
  Attendance rates are best for young children, are similar for in-school preteens and teens, and are lowest for after-school and community programs where attendance is not mandatory.

- **Dropout analyses were conducted in Year 2, Year 3, and Year 4 with the conclusion that those who remained in the program had similar characteristics to those who dropped out.**
  Therefore, it can be concluded that dropout poses little threat to the validity of the findings.

- **The amount of programming focused on parents was relatively small and decreased over the years.**
  Only one percent of program participants was parents, and four abstinence-only media ads were targeted to parents. Newly implemented parent recruitment strategies are expected to increase parent participation in calendar year 2003.

- **Characteristics of the high-risk adult population reveal a group at-risk for further STDs and nonmarital pregnancies and births.**
  The average high-risk adult participant has had about 20 different sexual partners over their lifetime, customarily drinks alcohol or uses drugs before sex, and did not use birth control the last time they had sex. Histories of physical and sexual abuse, and STD diagnoses are also common.

Recommendations

These recommendations have been derived from the experiences of the Abstinence Only Education Program administrators and program contractor staff in implementing the program over the five years. The recommendations encompass

important lessons learned and should be considered in ongoing or future implementation of abstinence-only programming. Recommendations are as follows:

- **In the future, contractors should plan ways to keep the material interesting and the students engaged because increasingly more preteens and teens entering the Abstinence Only Education Program have already received the program.**

  This trend suggests that the effect of multiple program exposures may warrant further examination as a resource issue (to determine, for instance, the effect of increased saturation as compared with increased outreach).

- **The diversity in participant groups suggests that it is important for the contractors to continue to be mindful of how they tailor the curricula and administer the program.**

  White children and youth were the minorities of all participants. Cultural sensitivity and cultural respect should go beyond language issues to include consideration of the ethnic/racial and socioeconomic backgrounds of the program educators, cultural symbols and metaphors, and the reflection of participants and their families in the curricula examples and content.

- **Future efforts should focus more attention on programming for parents.**

  Many studies involving the prevention of risk behaviors report that parents have the greatest influence on their children's lives. The amount of programming focused on parents thus far has been relatively small.

- **A different approach may be needed for probation, residential and detention center youths who are at high-risk with regard to their sexual behavior.**

  Because of the risk factors facing these youths, contractors need to examine and adapt the content and strategy needed for these groups. Contractors also have little control over whether or not the youths complete the program, suggesting the continuing need for adaptations in format.

- **Contractors that have experienced consistently high attendance rates should be studied with the intent of documenting and sharing best practices.**

  Obvious diligence among contractors directed toward increasing attendance showed marked success from Year 1 through Year 4. Attendance in Year 5 fell to Year 3 levels. This dip in attendance suggests the need for a renewed focus on retention.

- **In subsequent evaluation efforts, it would be useful to revise some of the participant survey questions.**

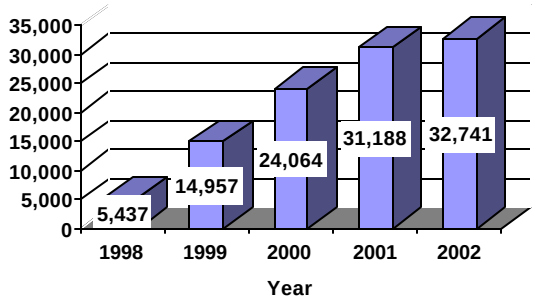
  Three specific examples are:

  - First, questions related to birth control use for teens excluded methods other than condoms and the pill. New contraceptive methods such as Deprovera, introduced in the mid 1990s, and methods reemerging in popularity, such as the sponge, should be considered. Questions related to birth control could be revised either to include more birth control options or to be more inclusive by using less detail, i.e., by referring to birth control in general.
  - Second, the literature suggests an important distinction between family structure and adolescent sex, especially for young females. Rather than ask the number of parents in the home, it would be helpful to differentiate two-parent biological and adoptive families from two-parent, stepparents or cohabitating parents.
  - Third, free lunch is not a useful indicator of individual economic status and should be dropped from the survey. Other indicators of household economic status should be explored.

Program Enrollment

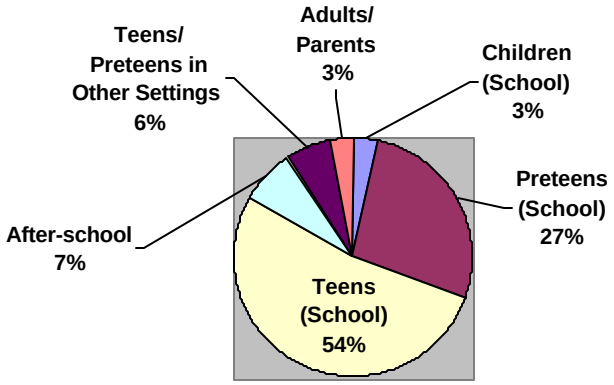
Contractor proposals originally projected a target of 13,000 participants in the first year. As seen in Figure 3.1, fewer participants were recruited in Year 1 than anticipated. The number of participants, however, has since grown rapidly. From inception of the targeted portion of the Abstinence Only Education Program in August 1998 until December 31, 2002, approximately 108,387 children, youths, and adults were enrolled. From January 1, 2003 until May 31, 2003 an additional 15,003 individuals were served. Individual program contractors have expanded their programs by adding both new school and community locations and more classes within existing locations and by providing a wider array of services and activities to those groups already served.

Figure 3.1 Number of participants enrolled by year[29]



The majority of program enrollees over the five years have been teens in grades 7 through 12. Young children, high-risk adults, and parents have composed the smallest proportions of enrollees. Figure 3.2 shows the distribution of enrollees by participant type for the five years of the program.

Figure 3.2 Distribution of enrolled participants (1998–2002)



As shown in Table 3.1, enrollment continually increased for school-based populations of preteens and teens. Children's programming increased in program years 1 through 4 and then experienced a large decline in Year 5. After-school, community and other youth settings saw increases in the first three years, followed by declining and varied enrollment. In contrast to the youth population, other target groups maintained a fairly low enrollment. Parent enrollment was very low relative to the number of children served and has steadily declined since the second year of

programming. Abstinence only programming for high-risk adults has shown consistent enrollment increases, from 194 in Year 1 to 524 in Year 5. High-risk adult programming has primarily focused on a unique population of individuals residing in substance abuse treatment centers.

Table 3.1 Distribution of participants enrolled by group

Target Group	Year 1	Year 2	Year 3	Year 4	Year 5	Total
School/Children (Grade 4)	179 (4%)	320 (2%)	565 (3%)	1,650 (5%)	429 (1%)	3,143 (3%)
School/Preteen (Grades 5–6)	874 (18%)	2,710 (21%)	6,664 (29%)	9,332 (31%)	10,164 (31%)	29,744 (29%)
School/Teen (Grades 7–12)	2,391 (51%)	6,174 (47%)	11,558 (50%)	16,526 (55%)	19,355 (59%)	56,004 (54%)
After-School and Community Settings	612 (13%)	1,679 (13%)	1,842 (8%)	1,031 (3%)	608 (2%)	5,772 (5%)
Other Youth Settings	380 (8%)	1,397 (11%)	1,691 (7%)	887 (3%)	1,534 (5%)	5,889 (6%)
Parents	84 (2%)	448 (4%)	293 (1%)	221 (< 1%)	127 (< 1%)	1,173 (1%)
High-risk Adult Setting	194 (4%)	282 (2%)	345 (2%)	490 (2%)	524 (2%)	1,835 (2%)
Totals	4,714 (100%)	13,010 (100%)	22,958 (100%)	30,137 (100%)	32,741 (100%)	103,560 (100%)

Notes:

Percentages are rounded to total 100.

Other youth settings include detention centers and group homes.

High-risk adult settings include residential substance-abuse treatment centers and shelters.

Not included in the table are those participants missing location data: Year 1 = 723; Year 2 = 1,357; Year 3 = 880; and Year 4 = 1,051.

The distribution of enrollees by contractor was extremely varied. As seen in Table 3.2, Catholic Social Service (Maricopa County) was the largest contractor, serving more than 13,000 enrollees over the five years. Table 3.2 is ordered alphabetically by county.

Table 3.2 Distribution of participants enrolled by site, calendar year

County Program Contractor	1998 (*N* = 5,436)	1999 (*N* = 14,928)	2000 (*N* = 20,797)	2001 (*N* = 31,188)	2002 (*N* = 32,741)	Total (*N* = 105,090)
Cochise						
Child & Family Resources (Sierra Vista)	0.0%	11.4%	5.9%	8.8%	8.9%	8,574 (8%)
Coconino						
Tuba City Regional Healthcare Corporation*	0.0%	0.0%	0.9%	1.9%	-	764 (< 1%)
Northern AZ University*	0.0%	0.0%	0.2%	0.1%	-	66 (< 1%)
Gila						
Gila County Cooperative Extension	0.0%	1.6%	1.7%	2.8%	0.7%	1,707 (2%)
Maricopa						
ASU Community Health Services	3.4%	1.4%	1.5%	1.3%	1.3%	1,509 (1%)
Catholic Social Service (Maricopa County)	10.0%	9.7%	12.1%	14.9%	12.4%	13,213 (13%)
Mountain Park Health Center	8.6%	5.7%	4.1%	3.2%	3.6%	4,386 (4%)
Passion & Principles of AZ, Inc.	25.7%	4.1%	8.9%	5.9%	6.4%	7,829 (7%)
St. Joseph's Hospital	12.0%	16.5%	14.5%	5.5%	8.2%	10,526 (10%)
Mohave & La Paz						
West Care AZ	0.0%	1.7%	6.2%	8.6%	13.7%	8,698 (8%)
Navajo						
Arizona Psychology Services	13.6%	2.9%	4.3%	3.7%	2.2%	3,941 (4%)
Pima						
Child & Family Resources (Tucson)	4.7%	2.8%	3.2%	1.9%	1.4%	2,387 (2%)
Pima Prevention Partnership	3.0%	15.1%	9.4%	11.5%	14.1%	12,580 (12%)
Pima Youth Partnership	3.1%	5.4%	4.5%	2.3%	1.4%	3,116 (3%)
Pinal						
Pinal County Division of Public Health	12.1%	4.7%	4.0%	2.5%	3.5%	4,115 (4%)
Santa Cruz						
Child & Family Resources (Nogales)	0.0%	2.6%	4.7%	8.8%	6.0%	6,062 (6%)
Yavapai						
Catholic Social Service (Yavapai County)	2.1%	7.0%	7.1%	5.8%	6.7%	6,648 (6%)
Yuma						
BHF Puentes de Amistad	1.7%	7.4%	6.8%	10.5%	9.5%	8,969 (9%)
TOTAL	100%	100%	100%	100%	100%	100%

Note: Total numbers of participants are slightly different than those presented in Figure 3.1 due to missing location data. Calendar year 1998 includes August 1998 through March 15, 1999; and calendar year 1999 includes March 16th through December 1999. * indicates no data received for calendar year 2002.

Participant Characteristics

This section examines changes in program participants' demographic characteristics over the five years of abstinence programming. The data are from pre-tests administered to participants at program entry; therefore, the participants described are a slightly larger group than those retained in the program. A brief description of each population, i.e., children, preteen and teen, high-risk adult, and parents, is provided. Within-group significant differences across years are determined using precision of estimate computation.[30]

Children

As shown in Table 3.3, the number of children served in Year 4 increased approximately 800% from Year 1. The majority of children enrolled in all years were Hispanic, increasing significantly to 75% in Year 4. The large percentage of Hispanics served in Year 4 was likely due to the largest contractor serving children, Child & Family Resources of Nogales, being in an area near the border with Mexico. The child population has been evenly divided between males and females with no significant year-to-year differences. The percentage of children living in two-parent households has varied over time, with Year 3 being significantly lower than all other years and Year 4 being significantly lower than Year 2. Two-parent families tend to hold a slight majority, although there is no indication as to what proportion of these may be stepparent or cohabitating family structures. The majority of children enrolled received free school lunches, although it is unclear what this means with regard to their individual economic status. It does indicate overall, however, that children's programming was provided in some economically depressed areas. The proportion of children receiving free school lunch was significantly higher in Year 1 than in subsequent years, although this variation may have been due to changes in eligibility verification cycles rather than in economic status. The average age of children in the program did not change appreciably over time and was about 10 years.

Table 3.3 Demographic characteristics of children

Demographic Characteristics	Year 1 (*N* = 236)	Year 2 (*N* = 363)	Year 3 (*N* = 1,071)	Year 4 (*N* = 1,884)
Hispanic	63%	57%	51%	75%
Female	54%	52%	49%	51%
Two-parent household	57%	66%	44%	53%
Receive free school lunch	77%	59%	51%	56%
Average age in years	10.2	9.5	10.0	10.2

Notes:

By definition, children are those participants in grade 4, however, some children from higher grades were administered the child survey and are included in this description.

The *N*s are higher than those presented Table 3.1 because this table includes all children regardless of location.

Approximately 39% of the child participants were missing demographic information for Year 5 and demographic characteristics, such as two-parent household, free lunch eligibility, and age, were not collected.

Preteens and Teens

Table 3.4 displays the grade distribution of preteen and teen participants for each program year. Several significant shifts were observed in this distribution; an exception is Grade 7, which did not change significantly in any year. Significant differences included:

- A decrease in the proportion of participants in grade 5 in program years 3 and 4 as compared with previous years.
- An increase in participants in grade 6 in Year 2, and a decrease in years 3 and 4 relative to Year 2.
- An increase in the proportion of participants in grade 8 relative to Year 1.
- A lower proportion of participants in grade 9 in Year 2 as compared with all other years, and in Year 4 relative to Year 3.
- An increase in participants in grade 10 in Year 4 relative to other years.
- A lower proportion of participants in grade 11 in Year 3 than in other years, and a higher proportion in Year 4 relative to Year 2.
- A higher proportion of participants in grade 12 in Year 1 as compared with program years 2, 3 and 4.

In summary, the grade distribution has narrowed, with the program serving proportionately fewer young children and high school seniors.

Table 3.4 Preteen and teen participants' grade distribution by program year

Grade	Year 1 (*N* = 3,570)	Year 2 (*N* = 9,377)	Year 3 (*N* = 15,338)	Year 4 (*N* = 20,437)
5	10.3%	9.0%	4.2%	2.9%
6	16.5%	19.5%	16.3%	17.0%
7	18.0%	19.4%	20.5%	19.6%
8	15.3%	23.2%	21.7%	21.6%
9	18.6%	11.1%	19.4%	17.5%
10	8.5%	8.6%	9.8%	11.6%
11	7.4%	5.6%	4.6%	6.8%
12	5.4%	3.6%	3.5%	3.0%

Notes:
This table includes all preteen and teen participants regardless of program location.
Grade distribution data were not available for Year 5.
Significant differences were computed using precision of estimate com putation.

Table 3.5 presents information on preteen and teen demographic characteristics across all program years for all program locations. The data reveal a progressive and significant shift in the proportion of male and female enrollees towards a more equal distribution in Year 5. Age deviated only slightly across the years. Hispanics as a proportion of the population was significantly higher in Year 5 compared to earlier years. The African-American/black population was significantly lower in Year 4 compared to other years. Asian Americans were significantly lower in Year 2 compared to other years and Native Americans were significantly lower in program years 2 and 5 compared to other years. Those classified as mixed ethnicity decreased as a proportion of the population in each year since Year 2. Related to the proportion of Hispanic participants, the program served significantly fewer English-only speakers in years 2 and 4. The proportion of youths speaking primarily Spanish in the home increased consistently in each year, with significant increases in years 2 and 4. Anywhere from 22% to 28% of preteens and teens reported Spanish as their primary language. Finally, while the percentage of individuals having received sex education classes at entry into the program remained fairly stable over the program years, a significant increase in the percentage of those who had received the abstinence-only education prior to entering the program occurred: from 30% in Year 1 to 48% in Year 4.

Table 3.5 Program participants demographic profile by year (grades 5–12)

Demographic Characteristics	Year 1 (*N* = 3,553)	Year 2 (*N* = 9,373)	Year 3 (*N* = 15,335)	Year 4 (*N* = 20,454)	Year 5 (*N* = 31,654)
Gender					
Male	44.5%	46.7%	47.7%	47.5%	48.4%
Female	55.5%	53.3%	52.3%	52.5%	51.6%
Average Age In Years	13.5	13.7	13.9	14.0	13.5
Ethnicity					
White/Caucasian	39.7%	32.7%	38.8%	38.4%	38.6%
Hispanic/Mexican-American	34.9%	45.1%	41.1%	43.5%	46.0%
African-American/Black	5.6%	4.7%	4.8%	4.0%	4.8%
Asian-American	1.2%	0.8%	1.3%	1.7%	1.3%
Native-American	6.2%	4.5%	6.7%	6.4%	4.2%
Mixed ethnicity	12.4%	12.2%	7.3%	6.0%	5.2%
Primary Language					
English	77.2%	71.3%	73.3%	71.6%	–
English and Spanish equally	16.2%	19.2%	16.4%	16.4%	–
Spanish	6.0%	8.9%	9.2%	10.8%	–
Other	0.6%	0.6%	1.1%	1.2%	–
Previous Education					
Sex education	64.5%	68.0%	70.8%	68.7%	–
Abstinence only	30.3%	40.1%	47.6%	47.8%	–

Notes:
This table includes all preteen and teen participants regardless of program location.
Dashes (–) represent data not collected for Year 5.
Significant differences were determined using precision of estimate computation.

High-Risk Adults

Table 3.6 displays select characteristics of the high-risk adult population. This population is the most consistent demographically from year to year of any population served by the Abstinence Only Education Program. Only one significant difference was found, the proportion of males in Year 2 was lower than in the other years. The information presented in Table 3.6 reveals a mostly male population, predominantly white, and mid 30s in age. Around 25% of the population in each year had not completed high school. Average age at first intercourse was approximately 15 years. The reported median number of lifetime partners was high at around 20. A substantial percentage of the population reported prior physical abuse, sexual abuse, or both. The majority of high-risk adults, around 80%, reported customarily using alcohol or drugs before sex; from 30% to 40% had been responsible for prior nonmarital births. From 27% to 17% of this population had

been previously diagnosed with a sexually transmitted disease. Given the average number of sexual partners, the use of alcohol and drugs associated with sex, and the fact that only around 50% reported using birth control at last sexual intercourse, this population presents as high-risk for further STDs and for nonmarital pregnancies and births.

Table 3.6 High-risk adult characteristics

Characteristics	Year 1 (*N* = 50)	Year 2 (*N* = 145)	Year 3 (*N* = 151)	Year 4 (*N* = 241)	Year 5 (*N* = 524)
Male	90%	71%	85%	83%	84%
Caucasian	58%	59%	62%	52%	61%
Single, divorced or separated	80%	80%	83%	92%	–
Average age in years	35	34	36	36	34
At least high school	73%	75%	82%	76%	–
Average age at first intercourse	15	15	15	15	15
Median number of lifetime partners	20	15	20	20	–
Ever physically abused	32%	25%	23%	19%	–
Ever sexually abused	20%	14%	18%	12%	–
Usually drink alcohol or take drugs before sex	83%	76%	82%	82%	–
Prior nonmarital births	40%	30%	34%	36%	–
Previously diagnosed with STD	27%	23%	21%	17%	–
Used birth control last time had sex	38%	52%	56%	48%	–

Notes:
Dashes (–) indicated data not collected in Year 5.
Significant differences across years were determined using precision of estimate computation.

Parents

Unlike the population of high-risk adults, the group of parent program participants has been demographically diverse over the five years. See Table 3.7. Also in contrast to the population of high-risk adults, the parent group was predominantly female. Year 1 was an anomaly as compared with other years in that the parents served were significantly more likely to be white, married, older, not employed, not a teen parent, and practicing a religion or spiritual program. The profile of the Year 1 parent was that of an adult whose child had relatively less risk compared to the children of other parents. For instance, the pregnancy rate for Arizona girls less than 19 years of age is lower for whites than for blacks, Hispanics, or American Indians. The Year 1 parent group was predominantly married and, therefore, not likely to be modeling sexual behavior outside of marriage. Year 1 parents were more likely to be in the home rather than employed and, therefore, more available to monitor their children's

behavior. Finally, 100% of Year 1 parents practiced a religion or spiritual program, a protective factor related to abstinence for children. In subsequent years the parent group served was much more diverse. Although equally female, parent groups in subsequent years were significantly less likely to be white, married, employed, or practicing a religion. Also, parent groups in subsequent years were significantly more likely to be younger and to have experienced parenting as a teenager. Year 5 saw a significant decrease in married parents compared to all other years. The proportion of parents practicing a religion was also lower in Year 5 as compared with all other years, but not significantly so relative to Year 4. Parent employment was higher in Year 5 than in all other years, but not significantly higher relative to Year 2.

Table 3.7 Parent characteristics

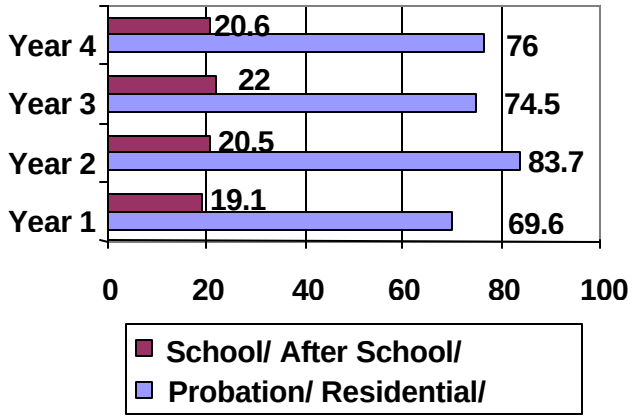
Characteristics	Year 1 (*N* = 84)	Year 2 (*N* = 448)	Year 3 (*N* = 293)	Year 4 (*N* = 204)	Year 5 (*N* = 127)
Female	80%	77%	80%	75%	71%
Caucasian	89%	31%	38%	43%	36%
Married	93%	52%	62%	55%	33%
Average age in years	47	34	39	37	42
Employed (full or part time)	41%	72%	67%	58%	82%
Married before intercourse	45%	31%	35%	33%	–
Was a teen parent	1%	17%	12%	18%	17%
Practice religion or spiritual program regularly	100%	69%	70%	65%	55%

Notes:
Year 5 information may be unreliable due to greater than 50% missing data for all characteristics.
Significant differences across years were determined using precision of estimate computation.

Sexual Behavior

Figure 3.3 reveals important differences in sexual behavior at pre-test between the youth population residing in probation, residential, and detention centers and those enrolled in school, after-school, and community programs. The proportion of school, after-school, and community program participants who had already engaged in sexual intercourse at pre-test remained fairly stable from Year 1 through Year 4. Year 5 data are from the post-test and are, therefore, not able to be compared. In contrast, from 70% to 84% of the probation and detention center population reported they had experienced sexual intercourse at pre-test. The proportion varied significantly across years, with Year 2 being higher than Year 1 and Year 3. Due to these substantial differences in sexual experience at pre-test, these two populations are described separately.

Figure 3.3 Percent of preteens and teens reporting sexual intercourse [31]



Sexually Experienced School, After-School, and Community Teens

Table 3.8 summarizes the pre-test responses of nonvirgin school, after-school, and community program participants to questions about their sexual behavior. The average reported age at first sexual intercourse varied only slightly from a low of 13.3 years in Year 2 to a high of 14.1 years in Year 1. Although not shown in Table 3.8, the proportion of individuals reporting their first sexual intercourse before age 13 was under 4.5% in years 1, 3, and 4. The rate in Year 2, 10.5%, was significantly higher than the other years. Excluding Year 1 data, which is less likely to be reliable because of the small sample size, several positive trends related to teen sexual behavior were observed. First, the percentage of nonvirgin participants reporting four or more lifetime sexual partners decreased significantly, from 31% in Year 2 to 25% in Year 4. A similar trend appeared in the percentage of individuals reporting four or more sexual partners within the past three months, declining significantly from Years 2 to Year 4. The percentage of youth reporting current sexual activity (i.e., sex in the past 30 days) was the greatest in Year 4. A substantial and significant decrease in the percentage of individuals reporting diagnosis of a STD occurred: down to 17.5% in Year 4 from a high of 22.6% in Year 2. Alcohol and drug use at last sexual intercourse also decreased significantly: down from 29.7% in Year 2 to 24.4% in Year 4. Condom use during last sexual intercourse increased significantly from Year 2 to Year 4; use of birth control pills before last sexual intercourse was also highest in Year 4 and significantly higher relative to Year 2 and Year 3. Finally, the percentage of nonvirgins reporting they had been pregnant or gotten someone

else pregnant decreased, significantly and consistently, from a high of 18.9% in Year 1 to a low of 12.5% in Year 4.

Table 3.8 Sexual behavior characteristics of nonvirgin teens from school, after-school, and community programs

Characteristic	Year 1 (*N* = 288)	Year 2 (*N* = 868)	Year 3 (*N* = 1,846)	Year 4 (*N* = 2,461)
Average age at first sexual intercourse	14.1	13.3	13.7	13.6
Four or more lifetime sexual partners	18.6%	31.3%	28.0%	24.7%
Four or more sexual partners in the past three months	2.1%	6.2%	4.0%	3.9%
Had sex in the past 30 days	65.3%	70.3%	63.3%	72.7%
Ever diagnosed with a STD	20.7%	22.6%	19.6%	17.5%
Alcohol/drug use at last sexual intercourse	29.5%	29.7%	25.2%	24.4%
Condom use during last sexual intercourse	70.0%	65.0%	67.1%	70.7%
Birth control pill prior to last intercourse*	45.5%	32.7%	38.8%	47.8%
Been pregnant/gotten someone pregnant	18.9%	17.5%	14.2%	12.5%

Notes:
Data are for students in grades 7 through 12.
*Ns for birth control question were Year 1 = 121; Year 2 = 367; Year 3 = 873; and Year 4 = 1,154.
Significant differences across years were determined using precision of estimat e computation.

Sexually Experienced Probation, Residential and Detention Center Teens

Table 3.9 summarizes the pre-test responses to sexual behavior questions for nonvirgin teen program participants residing in probation, residential, and detention centers. The questions asked were the same as those for their school, after school and community counterparts discussed above. Age at first sexual intercourse did not change significantly over the five years, ranging from 12.4 years in Year 4 to 13 years in Year 3. The percentage of teens reporting their first sexual intercourse before age 13 remained fairly stable, from a low of 26.1% in Year 3 to a high of 34.3% in Year 1. This is markedly different from the school, after school and community teens, who experienced proportionately less sexual intercourse prior to age 13. The percentage of teens reporting four or more lifetime sexual partners decreased from 60% in Year 1 to 51% in Year 4, with no significant differences between program years. Current sexual activity, including having four or more sexual partners in the past three months, did differ significantly, with Year 2 appearing to have been a particularly risky year. A slight increase, although not statistically significant, appeared in the percentage of individuals diagnosed with a STD: up to 37% in Year 4 from 27% in Year 3. A similar trend appeared in this period for alcohol or drug use at last sexual intercourse: up to 47% in Year 4 from 42.3% in Year 3. No significant

differences across program years appeared in condom or birth control pill use at last sexual intercourse. The percentage of nonvirgin teens reporting that they had been, or had gotten someone else pregnant, did not differ significantly across program years and remained fairly stable at around 30%.

Table 3.9 Sexual behavior characteristics for nonvirgin teens from probation, residential, and detention centers

Characteristic	Year 1 (*N* = 78)	Year 2 (*N* = 541)	Year 3 (*N* = 408)	Year 4 (*N* = 317)
Average age at first sexual intercourse	12.66	12.98	12.90	12.42
Four or more lifetime sexual partners	60.3%	55.5%	49.7%	51.1%
Four or more sexual partners in past three months	8.0%	12.6%	9.5%	6.0%
Had sex in the past 30 days	53.3%	76.5%	66.9%	54.4%
Ever diagnosed with a STD	41.0%	28.2%	27.2%	34.3%
Alcohol/drug use at last sexual intercourse	54.5%	53.2%	42.3%	47.0%
Condom use during last sexual intercourse	52.1%	53.7%	59.7%	52.9%
Birth control pill prior to last intercourse*	17.1%	27.1%	28.6%	21.5%
Been pregnant/gotten someone pregnant	32.5%	29.5%	26.2%	27.7%

Notes:
Data are for students in grades 7 through 12.
*Ns for birth control question were Year 1 = 41, Year 2 = 284, Year 3 = 203, and Year 4 = 177.
Significant differences across years were determined using precision of estimate computation.

Program Attendance

A major concern in delivering an educational program is attendance. Program participants who do not attend, or who attend sporadically, miss a large portion of program content and in addition can disrupt the dynamics of a group. Attendance data were obtained from the contractors' attendance forms and monthly reports. As shown in Figure 3.4, the percentage of program participants who attended at least 90% of program sessions increased significantly in each year of the program, with the exception of Year 5. Year 5 attendance declined significantly from Year 4. Conversely, the percentage of program participants attending less than 50% of the total number of sessions decreased significantly in the first four years, from 12% in Year 1 to 5.6% in Year 4, only to significantly increase in Year 5, up to the Year 3 level.

Figure 3.4 Program participants' attendance

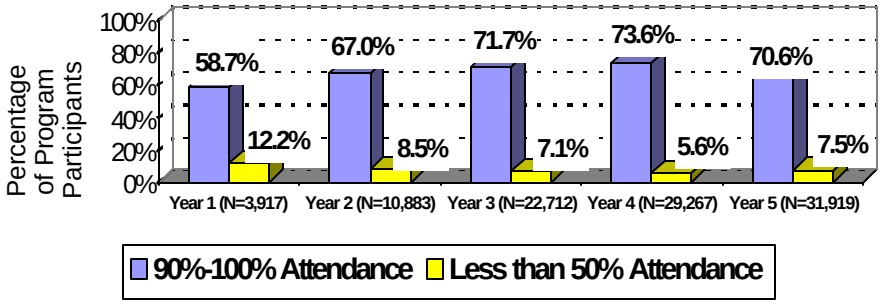


Table 3.10 summarizes program attendance for different target groups over the past two years. The numbers in Table 3.10 are the mean percentage of program sessions attended by participants, out of the total number of sessions actually delivered. This measure can be averaged across an entire group of participants. Table 3.10 shows that in general, younger children have better attendance than older children, and in-school programs have better attendance than after-school and community programs. The correlation between grade and attendance was statistically significant but very small, with children in younger grades attending a greater percentage of the total program sessions (Pearson's $r = -0.097$, $p = 0.000$).

Table 3.10 Percentage of sessions attended by group

Target Group	Year 4 (2001)	Year 5 (2002)
In-school program children (grade 4)	97%	93%
In-school program preteens (grades 5–6)	94%	89%
In-school program teens (grades 7–12)	92%	91%
After-school and community-based program participants	81%	85%
Note: Excludes residential treatment centers and shelters.		

Information on attendance in the detention and residential facilities is not presented because it was not available. Although participation in the Abstinence Only Education Program was mandatory in these settings, participants were sometimes terminated from the class for reasons beyond the contractor's control such as disciplinary infractions, release from the facility, or other administrative reasons.

The averages presented in Table 3.10 mask the variation in program attendance by contractor and location. Table 3.11 displays the average percentage of sessions

attended in Year 4 by contractor and population/location. Substantial variation in attendance is observed within each target group. For instance, attendance in children's programming ranged from 93% to 97%. Preteen attendance ranged from 89% to 97% and teen attendance from 84% to 100%. Attendance in after-school and community programs ranged from an average of 76% to 100% of sessions attended. It is important to note that different contractors serve populations that varied greatly in size and use curricula that vary in length and content. Except for children, total number of contact hours was significantly related to the percentage of the program sessions attended. However, the correlation coefficients were so small as to be considered not meaningful.[32]

Table 3.11 Percentage of sessions attended by site, Year 4

Program Contractor	School Children	School Preteens	School Teens	After-School/ Community
Gila County Cooperative Extension	N/A	96%	86%	100%
BHF Puentes de Amistad	N/A	89%	91%	N/A
Arizona Psychology Services	N/A	91%	89%	N/A
Catholic Social Service (Maricopa County)	93%	95%	89%	76%
Catholic Social Service (Yavapai County)	N/A	90%	88%	83%
Child & Family Resources (Tucson)	N/A	89%	84%	76%
St Joseph's Hospital	N/A	96%	97%	N/A
Passion & Principles of Arizona, Inc.	N/A	N/A	90%	82%
Pima Prevention Partnership	N/A	94%	96%	97%
Pima Youth Partnership	N/A	95%	87%	100%
Pinal County Division of Public Health	N/A	89%	86%	90%
West Care AZ	N/A	N/A	92%	N/A
Child & Family Resources (Sierra Vista)	96%	95%	95%	N/A
Child & Family Resources (Nogales)	97%	98%	98%	N/A
Tuba City Regional Healthcare Corporation	N/A	97%	100%	N/A
TOTAL	97%	94%	92%	81%

Note: Mountain Park Health Center was excluded from this analysis due to problems with the reliability of their attendance data. Northern AZ University was excluded for missing attendance data.

Dropout Analysis

It is important to determine if those who were retained in the program were a select group of participants potentially more likely to respond to the program than those who terminated early. On the other hand, it may be that the majority of participants who did not have matching pre-tests and post-tests (the means to determining dropout) dropped out of the program for fairly random reasons.[33] If those individuals who were retained in the program differed systematically from those who dropped out, interpretation of the findings could be biased and the results could not be generalized beyond those served. If dropout was fairly random, differential dropout could be ruled out as a threat to the validity of the findings. To assess this issue, a dropout analysis was conducted in program years 2, 3 and 4. Individuals who completed a pre-test but not a post-test were considered to have dropped out of the program. If an entire classroom or group failed to complete a post-test, or if the surveys could not be matched pre and post (because students had received a different version of the survey due to educator error) these individuals were not considered dropouts as the lack of a match was not due to individual factors. School-based dropouts and after-school/community dropouts were examined separately because youth receiving the program in different settings were likely to dropout for different reasons. Dropout in probation, residential, and detention centers was not evaluated because numerous factors beyond the participants' control led to their staying in for the whole program or leaving early. Statistical analyses were conducted (logistic regression) to determine what if any variables predict program dropout. Participant characteristics, baseline scores on program model variables, and program characteristics were examined as potential predictors.[34] The overall conclusion of the dropout analysis was that the potential bias to the findings due to differential dropout rates is quite small. Findings for preteens were similar. Essentially, no factors were strongly associated with preteen dropout from school-based programs. For after-school and community programs there was little to no threat from differential dropout; that is, youth who left the program did not look much different from those who stayed in the program.

Part 4. Outcomes

The evaluation of the Abstinence Only Education Program makes use of a quasi-experimental design to measure both short- and longer-term program outcomes. Results are presented separately for children, preteens, teens, high-risk adults, and parents. The pre- and post-surveys of program participants, two pre-test surveys administered to a delayed treatment group in Year 4, and a one-time follow-up survey of select Year 4 participants are the data sources used for the examination of outcomes. Supplemental data include the National Youth Risk Behavior Survey (YRBS) results and Vital Statistics data from the ADHS. The specific questions addressed include:

1. Was the program successful in motivating participants to choose abstinence until marriage?
2. Are there significant gains in short-term indicators (theorized to mediate the long-term program outcomes such as sex, pregnancy and birth before marriage) for participants from pre-test to post-test?
3. Do patterns in the findings emerge across different programs?
4. Are there different outcomes related to the types of programs (e.g., school-based versus non-school-based)?
5. What factors predict key outcome indicators?

Summary

Outcomes can be summarized as follows:

- **Children's scores on self-esteem and social acceptance increased significantly and reliably from pre-test to post-test.**
- **Preteens' intentions were generally favorable toward abstinence at both pre-test and post-test.**

  Although preteens' intentions to abstain did not change significantly over the course of the program, what did change was their insight into why they should remain abstinent. Preteens' post-test scores on five insight-related scales increased significantly in a direction consistent with the program's message. These insight-related scales were 1) health reasons to remain abstinent, 2) value reasons to remain abstinent, 3) attitudes about abstinence and premarital sex, 4) decision-making ability, and 5) plans and goals.

- **Teens, regardless of location, showed statistically significant positive changes on all 10 short-term outcomes.**

  The ten short-term outcomes showing significant change were health reasons to abstain, value reasons to abstain, attitudes about abstinence and premarital sex, norms about teen sexuality, attitudes toward birth control, intent to pursue abstinence, refusal skills, social information seeking, personal values exploration, and decision-making abilities. Delayed treatment data were used to rule out the effects of testing (taking the test more than once) and maturation (getting older) as possible explanations for the change. The analysis of delayed treatment data suggests that the program is successful at reversing the negative progression in reasoning that is "favorable toward having sex" that occurs without program participation.

- **Short-term outcomes that were maintained over time were improvement in refusal skills, an increase in teens' personal value exploration, and increased endorsement of the health benefits of abstinence.**

  Although significant gains in short-term outcomes were observed for all populations, some studies suggest that such gains are lost after a short period of time.[35] Follow-up evaluation of short-term outcomes revealed that gains on health reasons to choose abstinence, refusal skills, and personal values exploration did not change significantly. Taking a subsequent abstinence class had maintenance effects on three scales that otherwise showed significant decline: attitudes toward abstinence, norms about teen sexuality, and social information seeking. This suggests that duplication may be beneficial to maintaining attitudes, beliefs and knowledge. Attitudes toward birth control at follow-up evaluation returned to pre-test levels. Scores on intent to pursue abstinence also declined significantly, regardless of subsequent abstinence education. The amount of downward change tended to be small, except for those who reportedly had sex in the post-program period. This latter group's intentions to abstain were brought in line with their post-program behavior.

- **The follow-up study found a 95% abstinence success rate for virgins (defined as sexually abstinent since program participation, with virginity status measured at post-test) and a 52% abstinence success rate for nonvirgins.**

  A critical shortcoming in the evaluation of abstinence programs is that participants have rarely been asked to report actual sexual behavior; most

evaluations have instead limited questions to beliefs and attitudes about sexual behavior. The sexual behavior of a sample of teens in Year 4 was assessed in a follow-up study. Research literature suggests abstinence-only education works best for youth who have not yet engaged in sexual intercourse rather than as a remedial program for those who have become sexually active. Consistent with this research, the follow-up study found virgins had a substantially higher abstinence success rate than nonvirgins.

- **Holding other factors constant, three variables were predictive of engaging in sex in the post-program period. In order of relative importance these were 1) virginity status, 2) currently dating, and 3) teens' intentions toward abstinence at post-test.**
  These findings provide evidence of a link between intent and behavior that has been lacking in other evaluations of abstinence programs.[36]

- **Over time, attitudes towards abstinence and risk-taking behavior among those entering the program became more favorable, and this coincided with increased exposure to abstinence-only education in schools, the community and the media.**
  Preteen and teen program participants across the first four years of programming were found to shift in their baseline attitudes, intentions, and behaviors in a manner that favored abstinence and less risky sexual behaviors. School, after-school, and community program participants showed greater change in these areas than probation, residential treatment, and detention center participants.

- **For 2001, live birth rates among female program participants by age cohort were lower than comparable state rates, and some of the difference appears to be attributable to the program.**
  Similarly, live birth rates for Hispanic and white program participants age 15 to 17 years were lower than comparable state rates. The calculation of live birth rates for program participants are subject to underestimation due to error in recording and attrition due to participants giving birth out of state. Selection bias may also account for some of the difference, however selection bias is present in both directions. For instance, the fact that Hispanic females are over represented in the participant population compared to their representation in the state makes the program participant group more risky for live births than the state population. In contrast, an over representation of participants attending parochial schools

compared to the general state population of females makes the participant group less risky for live births. The program also targets youths with high-risk sexual behaviors from probation, residential treatment, and detention centers. Together, these population characteristics are somewhat likely to counterbalance one another, leaving room to ascribe some of the rate difference to program impact.

- **High-risk adults demonstrated significant and reliable change consistent with the program's message in four of seven areas.**
  Areas of significant change included value reasons to abstain, social-relational reasons to abstain, belief in abstinence, and rejection of risk-taking behavior. For two of the three areas where change was not reliably significant (health reasons to abstain and personal responsibility for sexuality), a ceiling effect indicated high endorsement of the concept at pre-test.
- **Parents overwhelmingly supported the program as having assisted them in feeling more comfortable and willing to talk to their children about sex, and in clarifying their attitudes and values about their children's sexual behavior.**
- **Three areas of program emphasis—motivational, informational, and skills—had a positive impact on short-term outcomes. Programs emphasizing the health benefits of abstinence tended to increase preteens' intentions to abstain.**
  Although no single pattern of effective program characteristics emerged, certain program skill components point to improved outcomes, including teaching sexual refusal skills with teens and teaching general efficacy skills with preteens. No program-related variables were significantly related to the likelihood of sexual intercourse post program.

Recommendations

These recommendations have been derived from the experiences of the Abstinence Only Education Program administrators and program contractor staff in implementing the program over the five years. The recommendations encompass important lessons learned and should be considered in ongoing or future implementation of abstinence-only programming. Recommendations are as follows:

- **Prevention programs should be designed based on what is known about the factors that influence adolescent sexual decision-making, as revealed by theory and research.**

  Children's programming focused on self-esteem and social acceptance and demonstrated success at increasing these constructs in the short-term. The research literature does not, however, support a link between self-esteem, social acceptance, and the onset of sexual behavior. Some studies have found that self-esteem is actually lower among adolescents who have never engaged in sexual intercourse.[37] Similarly, anecdotal evidence from the *Not Me Not Now Program* in Rochester, New York with youths in grades 5 through 8 suggests that those in the "doing-it crowd," i.e., those having sex, are perceived as the popular kids in school.[38] These findings suggest a complex relationship between self-esteem, social acceptance, and adolescent sexual behavior.

- **Future programming should target the three factors that were significantly related to the likelihood of teens having sex in the post-program period**.

  First, the importance of sexual experience to subsequent sexual behavior suggests the importance of early efforts at primary prevention. Second, the importance of dating suggests attention to improved dating-related skills. Also critical in the area of dating are both the role of parents as dating monitors and the role of schools and communities in providing alternative pro-social activities. Intentions to abstain were also important in reducing the likelihood of sex in the post-program period. An emphasis on the health benefits to abstain was found to be effective in improving post-test scores on intentions to abstain.

- **The findings on parent programming suggest the need to address clear communication of sexual expectations for all children, and should include how these expectations may differ from adults' sexual expectations for themselves.**

  Not only does parent programming need to increase its reach, it needs to be more comprehensive to include factors that are known to influence adolescent sexual decision making, as revealed by the research. These include the dynamics that lead to increased rates of sexual behavior in single parent families, parenting style research, and parents' roles in monitoring behavior.

- **Subsequent evaluation efforts should examine Vital Records data to determine if the findings on live birth rate comparisons for 2001 are an isolated or sustained program impact.**

Children

Children's programming took place within the schools and focused primarily on self-esteem and social-skills building rather than teaching concepts about abstinence. The children's survey assessed five domains: 1) decision making, 2) self-esteem, 3) social acceptance, 4) pro-social activities, and 5) risk-taking activities. Sexual activity was not assessed due to the age and corresponding developmental level of the children. Table 4.1 presents the statistical significance of paired t-tests examining pre- and post-test changes on five scales over three consecutive years. Outcome data are not available for Year 1 and only post-tests were collected in Year 5.

Table 4.1 Statistical significance of pre- and post-test change for children

Scale	Year 2 (*N* = 239)	Year 3 (*N* = 239)	Year 4 (*N* = 1,127)
Decision-making	No	No	Yes
Self-esteem	Yes	Yes	Yes
Social acceptance	Yes	Yes	Yes
Pro-social activities	No	No	No
Risk-taking activities	No	No	No

As seen in Table 4.1 (page 4-4), a consistent pattern of statistically significant change occurred on two of the five scales. Children's scores on self-esteem (feeling good about oneself and having the belief that one is happy), and social acceptance (feelings of being accepted, liked, and having friends) increased significantly from pre- to post-test in all three years assessed. Decision-making improved significantly in one of the three years. Children were also asked whether or not they engaged in pro-social and risk-taking activities. Scores on these two scales did not differ significantly from pre- to post-test periods in any of the three years. Children generally reported higher scores on pro-social activities, such as playing with friends, playing games and sports, and spending time with family, and lower scores on risk-taking activities, such as fighting, getting in trouble, and stealing, at both points in time. In the absence of comparison- or control-group data, it is not possible to estimate whether or not the statistically significant changes observed for self-esteem or social acceptance would

show for children who did not receive the program. However, given the relatively short duration of the program, it is unlikely that the significant changes result from maturation. The fact that the significant findings on self-esteem and social acceptance were replicated across three years also supports the program as the cause for the change.

Despite the apparent positive impact of the program, it is unknown if the positive gains in self-esteem and social acceptance 1) would be maintained and 2) would have any impact on the initiation of sexual behavior. Although many programs have focused on self-esteem as a possible mediator of sexual behavior, the research literature suggests a complex relationship.[39] No research was found linking social acceptance to sexual behavior.

Preteens

The statistical significance of changes in short-term outcomes for preteens is presented in Table 4.2. Five of the six scales changed significantly from pre-test to post-test in a direction that implies a positive impact of the program. The first two scales in Table 4.2 concern reasons not to have sex. Preteens were asked to rate the importance of eight reasons not to have sex, including health reasons, such as STDs and pregnancy, and reasons related to personal values. Preteens showed a statistically significant increase from pre-test to post-test on both health and personal value reasons not to have sex. Two items measured abstinence attitudes: "*I would tell my friends to wait to have sex*" and "*abstinence makes sense for kids my age.*" Preteens' attitudes favoring abstinence were significantly higher at post-test. Decision-making abilities captures an individual's perceived ability to make decisions without being overly influenced by others' values. Preteens' scores on decision-making ability and on the goals and plans scale also increased significantly from pre- to post-test.

Intent to remain abstinent, i.e., the participants' gauge of the likelihood of avoiding sex prior to marriage and high school graduation, did not change significantly. At pre-test, preteens indicated their intent to remain abstinent until reaching both milestones; these intentions remained strong at post-test. Thus, the lack of change was due to a ceiling effect, that is, due to the high scores at pre-test.

Table 4.2 Statistically significant pre- and post-test differences for preteens

Scale	Year 3 (*N* = 4,232)	Year 4 (*N* = 6,104)
Health reasons to choose abstinence	Yes	Yes
Value reasons to choose abstinence	Yes	Yes
Attitudes about abstinence & premarital sex	Yes	Yes
Decision-making	Yes	Yes
Plans and goals	Yes	Yes
Intent to pursue abstinence	No	No

Notes:
Year 2 findings are not presented because the survey changed in Year 3, making the scales inconsistent across the years.
Pre-test data were not collected in Year 5.
Statistical significance between pre- and post-test means was determined using t-tests for paired means.
Chronbach's *Alpha* coefficients computed with Year 3 and 4 data indicated good (> 0.60) to excellent reliability for the six scales at pre - and post-test.

School, After-School, and Community Teens

Only teens under age 19 and not married at pre-test were included in the analysis. Teens' scores on the 10 scales presented in Table 4.3 all changed significantly and reliably from pre- to post-test. Overall, the changes were in a direction consistent with the program's message.

Teens highly endorsed health reasons to remain abstinent at pre-test (the average score was 3.4 on a zero-to-four scale) and at post-test (average score of 3.5). Value reasons were also endorsed at pre-test, but to a lesser extent than health reasons, and increased similarly at post-test. Attitudes favoring abstinence were moderately endorsed at pre-test and were endorsed slightly more so at post-test. Subjective norms, the perception that others in one's circle of friends are sexually active, was slightly endorsed at pre-test and increased in a positive direction at post-test. Two items measured attitudes toward birth control: "*more people should be aware of the importance of birth control,*" and "*people having sex should use birth control.*" The direction of change on attitudes toward birth control was toward a less favorable view at post-test. This might be explained by the program's focus on the failure rates of contraceptives as opposed to their availability, use, and access.

Intent to pursue abstinence was measured by asking teens how likely they were to have sex prior to five milestones: age 20, high school graduation, a serious relationship, marriage, and within the next year. In Year 4, most teens said it was

somewhat likely they would have sex by the time they were 20 (80%), however, a substantial percentage said they were not likely to have sex before high school graduation (45%), before being in a serious relationship (43%), within the next year (53%), or before marriage (34%). Abstinence intentions changed from pre-test to post-test, with teens endorsing abstinence to a greater extent at post-test.

Refusal skills measures the individual's perceived ability to refuse unwanted sexual advances with such items as "I feel comfortable refusing to have sex" and "I know how to avoid sex if I don't want it." On average, teens agreed with this notion at pre-test, and agreed more so at post-test. Social information seeking assesses the individual's use of others as resources for assistance in developing personal sexual values. Items include "I talk to people to get advice about my sexual values" and "I have learned a lot about my own values by listening to others." Social information seeking was not well endorsed at pre-test and increased to a moderate level at post-test. Personal values exploration measures the teens' propensities to be introspective and think about their values. Personal values exploration was mildly endorsed at pre-test and more solidly endorsed at post-test. Decision-making ability was solidly endorsed by teens at pre-test, and endorsed slightly more so at post-test.

Table 4.3 Statistically significant pre- and post-test differences for teens

Scales	Year 3 (*N* = 7,196)	Year 4 (*N* = 10,860)
Health reasons to choose abstinence	Yes	Yes
Value reasons to choose abstinence	Yes	Yes
Attitudes about abstinence and premarital sex	Yes	Yes
Norms about teen sexuality	Yes	Yes
Attitudes toward birth control	Yes (decrease)	Yes (decrease)
Intent to pursue abstinence	Yes	Yes
Refusal skills	Yes	Yes
Social information seeking	Yes	Yes
Personal values exploration	Yes	Yes
Decision-making abilities	Yes	Yes

Notes:
Statistical significance between pre- and post-test means was determined using t-tests for paired means.
Three scales—norms about teen sexuality, attitudes toward birth control, and pers onal values exploration—had fair reliability, i.e., *Alpha* coefficients around 0.60. The remaining scales had good to excellent reliability.

Probation, Residential, and Detention Center Teens

Table 4.4 shows a similar pattern of change in short-term outcomes for the probation, residential, and detention center teens as that presented above for the school, after-school and community teens. All but one scale revealed statistically significant change from pre- to post-test. Decision-making ability, an individual's perceived ability to make decisions about sex without being overly influenced by others' values, did not change significantly in Year 4. Consistent with their teen counterparts, the probation, residential, and detention center teens showed a statistically significant decrease in favorable attitudes toward birth control.

Table 4.4 Statistically significant pre- and post-test differences for teens

Scales	Year 3 (*N* = 386)	Year 4 (*N* = 435)
Health reasons to choose abstinence	Yes	Yes
Value reasons to choose abstinence	Yes	Yes
Attitudes about abstinence and premarital sex	Yes	Yes
Norms about teen sexuality	Yes	Yes
Attitudes toward birth control	Yes (decrease)	Yes (decrease)
Intent to pursue abstinence	Yes	Yes
Refusal skills	Yes	Yes
Social information seeking	Yes	Yes
Personal values exploration	Yes	Yes
Decision-making abilities	Yes	No

Notes:
Statistical significance between pre- and post-test means was determined using t-tests for paired means.
Three scales—norms about teen sexuality, attitudes toward birth control, and personal exploration—had fair reliability, i.e., *Alpha* coefficients around 0.60. The remaining scales had good to excellent reliability.

Assessing Threats to the Validity of the Findings on Short-term Outcomes

In Year 4, delayed treatment data were collected from select program sites to assess whether observed changes in short-term outcomes were the result of testing, i.e., taking the test more than once, or of short-term maturation, i.e., changes that occur with growing older. To assess the importance of testing and maturation to the validity of the findings, program participants took two pre-tests prior to receiving the program and then took a post-test after the program. The time interval between the

two pre-tests approximated the duration of the actual program. Analysis of the delayed treatment data showed that teens demonstrated more change from the second pre-test to the post-test than they did between the two pre-tests; this rules out testing and maturation as threats to the validity of the findings. Interestingly, teens' scores increased on reasons to have sex between the two pre-tests and then decreased between the second pre-test and the post-test. This indicates that the program is successful at reversing the initial negative progression in reasoning about sex.

An additional threat to validity—selection bias—suggests that observed changes in short-term outcomes are due to the participants in the program being different from those who did not take the program or from those who were not offered the program. To respond to the threat of selection bias, Arizona Abstinence Only Education Program participants from grades 9 through 12 were compared to the national and New Mexico samples from the Youth Risk Behavior Survey (YRBS). New Mexico was chosen for comparison because it is geographically adjacent to Arizona and the two states have important characteristics in common, including a shared border with Mexico and a large Hispanic population. The Arizona sample showed more differences than similarities to the national school-based sample and showed more similarities than differences to the youth demographic characteristics and sexual behavior rates of New Mexico. It was concluded, therefore, that the program participants appear to adequately represent the Arizona adolescent population who attend high school.[40]

Are Changes in Short-term Outcomes Maintained Over Time?

At least one study of a related-program suggested that short-term gains in knowledge and attitudes were lost over a three-month period.[41] Change in post-test attitudes and intentions were assessed through a follow-up study of 737 nonmarital program participants. The follow-up period ranged from a minimum of three months to a maximum of 13 months post program participation. Each follow-up participant was given $15 or a gift certificate of equal value as an incentive. Although broader participation was sought, follow-up data were collected from the participants of only four program contractors: Catholic Social Service (Maricopa County) (43%), Catholic Social Service (Yavapai County) (2%), Pima Prevention Partnership (28%), and West

Care AZ (27%). The majority of follow-up participants reported experiencing various types of education prior to the Abstinence Only Education Program. For instance, 34% reported birth control education, 83% reported sex education, and 53% reported prior abstinence-only education. Follow-up participants ranged in age from 13 to 18 years and averaged 15.1 years in age. The distribution of the sample by sex was 45% male and 55% female.

The follow-up analysis examined change from post-test to follow-up survey on eight scales for six subgroups of participants (see Table 4.5). Several conclusions can be drawn from the results of this analysis. Scores on three of the eight scales—health reasons to choose abstinence, refusal skills, and personal exploration—did not change significantly over time for any of the subgroups. Taking a subsequent abstinence-only class had maintenance effects on the scores of three scales that otherwise showed significant decline: attitudes favorable to abstinence, norms about teen sexuality, and social information seeking. Attitudes toward birth control became significantly more favorable between post-test and follow-up and reversed a significant decline from pre-test to post-test. Nonvirgins and those engaging in sex since the program highly endorsed birth control at post-test and at follow-up. Interestingly, those who took another abstinence class after the post-test also increased in attitudes favorable to birth control. This increase may be explained by participants being exposed to a combination of sex and HIV education efforts within schools and the media. Of those who took another abstinence class, 55% reported also taking a sex education class and 45% reported also taking an HIV class.

Intent to pursue abstinence declined significantly from post-test to follow-up, regardless of subsequent abstinence-only education. The amount of downward change tended to be small, averaging around –0.2 to –0.3 for all subgroups, except for those who reportedly had sex since the program. This latter group averaged a decrease of 0.9 on a scale of zero to four. Among those who had sex since the program, their post-program intentions to pursue abstinence were brought in line with their post-program behavior; they indicated little to no intention of remaining abstinent.

Table 4.5 Significance and direction of change from post-test to follow-up

Scale	Virgin at post-test (*N* = 590)	No sex since the program (*N* = 608)	Nonvirgin post-test (*N* = 92)	Sex since the program (*N* = 79)	Took another abstinence class	
					Yes (*N* = 74)	No (*N* = 616)
Health reasons to choose abstinence	No	No	No	No	No	No
Attitudes about abstinence	Yes (decrease)	Yes (decrease)	No (ceiling effect)	Yes (decrease)	No	Yes (decrease)
Norms about teen sexuality	Yes (decrease)	Yes (decrease)	No (ceiling effect)	No (ceiling effect)	No	Yes (decrease)
Attitudes toward birth control	Yes (increase)	Yes (increase)	No (ceiling effect)	No (ceiling effect)	Yes (increase)	Yes (increase)
Intent to pursue abstinence	Yes (decrease)	Yes (decrease)	No (ceiling effect)	Yes (decrease)	Yes (decrease)	Yes (decrease)
Refusal skills	No	No	No	No	No	No
Social information seeking	Yes (decrease)	Yes (decrease)	No	No	No	Yes (decrease)
Personal exploration	No	No	No	No	No	No

Notes:

Value reasons to abstain and decision-making could not be assessed at follow-up due to differences in the post-test and follow-up survey formats.

For those participants who took another abstinence class, results were the same regardless of virginity status.

Post-program Teen Sexual Behavior

The follow-up analysis also examined sexual behavior. At the post-test, 13.5% of the follow-up sample were not virgins. By follow-up, that percentage had increased to 18.5%. By this time, one percent of follow-up participants (seven teens) already had children. Eleven percent of the participants (82 individuals) reported having had sexual intercourse since completing the Abstinence Only Education Program. The overall success rate, defined as the percentage of the total subgroup remaining abstinent post program, was 52% for nonvirgins compared to 95% for virgins. These findings are consistent with other research that suggests abstinence-only education programs may work best for adolescents who have not yet experienced sexual intercourse.[42]

The follow-up analysis was intended to follow two approaches but was limited to within-group analysis.[43] The within-group analysis examined the follow-up participants to determine what variables positively or negatively influenced their likelihood of having sexual intercourse post program. The effect of several independent variables on whether or not teens had sex post program were examined with a statistical test called logistic regression. Sexual behavior was also examined as a

continuum of progressive behaviors, represented by the following values: zero, for no sexual behavior; one, for kissing on the mouth; two, for tongue kissing; three, for fooling around above the waist; four, for fooling around below the waist; and five, for sexual intercourse. Again, a range of variables were examined to determine which, if any, were predictive of higher scores on the continuum of sexual behavior (linear regression was the statistical test used for this analysis).

Three variables were found to be significant in the analysis examining sexual intercourse post program. The variable with the greatest relative impact was virginity status at post-test.[44] Those who were sexually experienced at the post-test period were more likely to have sex post program than were virgin program participants. Of next relative importance was dating. Teens who considered themselves as having a boyfriend or girlfriend at follow-up were more likely to have had sex post program. Finally, intention to remain abstinent at post-test was a protective factor; higher scores on intention to abstain were associated with a decreased likelihood of sex in the post-program period. Using the odds ratios from the logistic regression equations, the percentage probability of having sex in the post program period was estimated for the average 15-year-old program participant under different conditions. For example, the average virgin program participant that is not currently dating has a 2% probability of having sex in the follow-up period. Dating increases the probability of sex for the average virgin program participant by 4%. In contrast, the average nonvirgin program participant who is not dating has a 10% probability of having sex post program while the average nonvirgin program participant who is dating has a 26% probability of having sex post program.

Findings from the analysis considering the continuum of sexual behaviors observed post program were highly consistent with those predicting sexual intercourse. The same three variables were found to be significant with regard to sexually progressive behavior in the post program period as were found to be significant in the prediction of sexual intercourse. In order of relative importance, these were: 1) virginity at post-test (nonvirgins were more likely to engage in more sexually progressive behaviors), 2) currently dating, and 3) intention to pursue abstinence post program. Three additional variables were significant in the progression of sexually riskier behavior. In descending order of importance these were: 1) age, with older children engaging in progressively riskier behavior, 2) risk behaviors at pre-test (such as stealing, fighting, etc.), with a history of risk behaviors being predictive of advanced sexual behavior, and 3) religiosity at pre-test, with greater religiosity being associated with less sexually

progressive behaviors. Variables not significant, but held constant, were ethnicity, time between post-test and follow-up, gender, usual grades in school, number of parents, and program dosage. It is important to note that family structure has been strongly associated with male and female adolescent sexual behavior in the research literature (see Appendix C). The measurement of this variable as a simple metric in this evaluation is likely the reason it was not significantly associated with sexual behaviors. A preferable way to measure family structure would be to ask if "*both biological or adoptive parents are in the home.*" A second problematic variable, free lunch eligibility, was used as a proxy for socioeconomic status. This variable was not significant in the follow-up analysis, which may be a result of measurement error.[45]

Evidence of Program Impact on Teens

It is difficult to fully assess the impact of a program such as the Abstinence Only Education Program without a comparison or control group. It is equally challenging to directly determine the impact of the media campaign on sexual behavior. Two additional strategies were used to provide some indication of program impact.

Social Forces and Social Drift

In responses to program pre-tests and telephone surveys for the media campaign evaluation, increasing percentages of those youths surveyed said they had already been exposed to the Abstinence Only Education Program (see Table 3.5 and Table 6.3). If the participants in the sample were found to shift their baseline attitudes, intentions, and behaviors over time, this would suggest that social forces and general exposure to the abstinence message might be having an effect. Trends were examined by comparing demographic data and pre-test scores on the short-term outcomes and behavior over the four years. A positive change appeared in the participant responses over time for questions regarding abstinence before starting the program. Both teen and preteen populations in school, after-school, and community settings showed significant increases across program years for the pre-test scale scores that were available for valid comparison; these are health and value reasons to abstain, attitudes toward abstinence, subjective norms, intent to pursue abstinence, and teens' refusal skills. The probation, residential, and detention center youths showed fewer significant changes but did increase in baseline attitudes towards abstinence and subjective norms between years 3 and 4.[46] The pre-program sexual behaviors of program participants presented a mixed message. No significant change occurred in the percentage of teens coming into the program with sexual experience.

Participants from school, after-school, and community programs, however, show a baseline trend toward engaging in less risky sexual behaviors; this was evidenced by significant decreases in sex-associated drug and alcohol use, increase in use of condoms and the birth control pill, and decrease in reported STD diagnoses and pregnancy. The probation, residential, and detention center participants, as compared with other youths, reported higher rates of sexual behavior, lower rates of birth control use, and less endorsement of abstinence; no significant changes in these outcomes appeared at pre-test during the program the years. Consequently, these findings support the idea of shifts toward more favorable abstinence beliefs and attitudes and toward less risky sexual behaviors among sexually experienced teens.

Live Birth Rate Comparisons

One way to assess whether the program is having a positive impact on females is to compare the live birth rates of female program participants to those of Arizona females of similar age who did not receive the program. To do this, the database from the Abstinence Only Education Program was matched to the statewide database of birth certificates (Vital Records). Students were considered participants if their names were in the attendance database. To some extent this may have overestimated actual participants because some students may not have completed or received an adequate dosage of the program. The overall results of the Vital Records match is also likely to underestimate in other ways the actual number of births to program participants. Underestimation could be due to errors in names or birth dates recorded on the program participant surveys or to attrition due to participants giving birth out-of-state. It has been observed that program participants were sometimes unaware of their year of birth. With regard to names, the use of nicknames creates a problem for the match. For example, if a program participant who gave birth in 2001 recorded her name as “Chayo” on her participant survey and then wrote her name as “Rosario” on her child’s birth certificate, the match would go undetected and would be an underestimation error. Underestimation due to error in recording was a greater problem with the Year 1 and Year 2 cohorts. Subsequent to Year 2, steps were taken to have the adolescents record their names on the participant survey seven different times. These multiple responses were examined and the most frequent name was used for matching. Also, year of birth has since been calculated from recorded age, and is used in confirmation of birth year.

Since information on teen fathers is often not recorded on birth certificates, the analysis only included females. To calculate live birth rates, program participants from Year 2 (April 1999 to December 1999) were matched to the Vital Records database for 2001 (see Table 4.6). Year 1 cohort data were matched; however, this information is not presented because the calculation of rates is highly sensitive to small changes due to the relatively small numbers of participants in each age cohort for Year 1. Program participants in years 3, 4 and 5 require additional years of Vital Records data for matching. Year 3 program participants may have become pregnant prior to the program and given birth in 2001.

Table 4.6 Birth rates of program participants by mother's age

Birth year/age in years as of 2001	Year 2 Cohort				
	Total number of participants	Total number of births to participants	Overall birth rate of program participants	Total number of nonmarital births to participants	Birth rate of nonmarital participants*
1983/18 yrs	462	32	69.3	28	61.1
1984/17 yrs	680	34	50.0	32	47.2
1985/16 yrs	934	28	30.0	27	28.9
1986/15 yrs	980	15	15.3	14	14.3
1987/14 yrs	881	0	0	0	0

Notes:

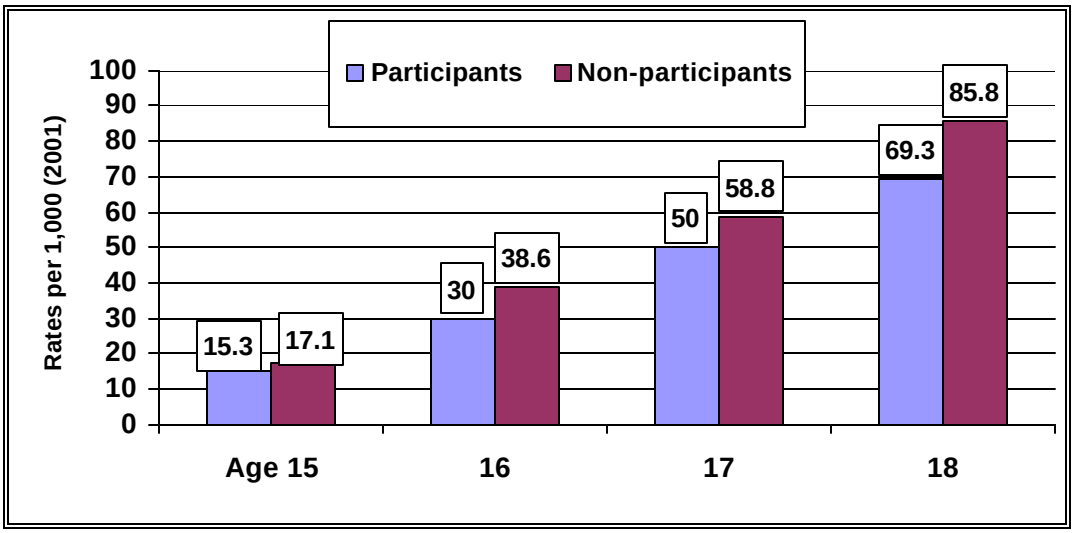
Rates per 1,000 are calculated by dividing the number of births by the total number of persons and then multiplying by 1,000.

Rates per 1,000 can only be reliably calculated for groups where the total number of participants is 300 or greater. Even at 300, three births increase the rate by 10 rate points.

*Birth rates to nonmarital participants are somewhat underestimated as it is unknown what the total nonmarital *N* is by age; thus, the denominator was reduced only by the birth certificate information on marital status for those who gave birth.

Comparable live birth rates for the non-participant population of age-mate females, regardless of marital status, were calculated from 2001 Vital Records data, as shown in Figure 4.1.

Figure 4.1 Comparison of live birth rates for participants and non-participants (2001)



For each age cohort, the state live birth rates were higher than overall live birth rates of the program participants. For 18-year-old females the state rate was 19% higher than the participant rate; for 17-year-old females, 15% higher; for 16-year-old females, 22% higher; and 15-year-old females, 11% higher.

The difficulty in interpreting the rate difference is to extract the proportions of the rate difference that are due to program effect, error, and selection bias. Errors in underestimating the live birth rates of program participants has been discussed, and are expected to decrease in that checks and balances have been introduced with subsequent participant cohorts. Selection bias comes from attrition in the participant sample. Participants who give birth out of state would not be included in the total number of participant births. The state sample is not affected by attrition in the same way because the out migration of pregnant adolescents is likely balanced by comparable in migration. Selection bias also occurs in the differential risk of the two populations, program participants and the general Arizona population. In some ways the program serves a riskier population than is found in the state. For instance, the Abstinence Only Education Program over served Hispanic females according to their proportion in the Arizona population. For the Year 2 cohort, 48.6% of female

program participants age 15 to 17 years indicated they were Hispanic while 35.6% indicated they were white. By comparison, of females 15 to 17 years old in the state, 53.3% are white and 32.2% are Hispanic. Overall, in 2001 Arizona Hispanic females of 15 to 17 years of age had a live birth rate of 73.4 per 1,000 while their white counterparts had a birthrate of 16.1 per 1,000. Comparing the 2001 live birth rates of program participants with those of the state population in general shows that the rate for program participants was about 20% lower for both Hispanics and whites. The 2001 live birth rate of Hispanic program participants 15 to 17 years old was 58.7 per 1,000 as compared with 73.4 per 1,000 for state non-program participants. The comparable 2001 live birth rates for whites were 12.5 per 1,000 for program participants 15 to 17 years old and 16.1 per 1,000 for the general state population. The program also targets probation, residential, and detention center populations. The Year 2 female program participants included 11% probation, residential, and detention participants among 15-year-old participants, 7% among 16-year-old participants, and 3% among 17-year-old participants. The sexual behavior of this subgroup, as documented in Part 3, puts them at particularly high-risk of teen births. The percentage of this group in the female population of the state overall is not known.

Finally, although exact estimates are not available, program participants were more likely than their state counterparts to attend parochial schools. Attendance at parochial schools has been identified as a protective factor for adolescent sex (see Appendix C). Over the years, and in response to issues with participant recruitment and retention, the program has evolved to serve populations at less risk for nonmarital birth. Some after-school programs were dropped in favor of school programs where high rates of attendance were easier to achieve. Also, some program contractors quit serving schools where students presented greater classroom management problems for the program educators. No mathematical formula can determine what proportion of the live birth rate difference is due to error (that is, the underestimation of birth rates due to recording error and attrition in the participant sample) or selection bias (that is, differential risk for live births due to the over sampling of Hispanics; the targeting of probation, residential treatment, and detention center populations; and the inclusion of a greater proportion of parochial school students in the participant sample). The fact that the differences in selection bias are somewhat likely to counterbalance the risk for nonmarital birth in the participant and non-participant groups leaves room for ascribing at least some of the rate difference to program impact.

High-risk Adults

High-risk adult programming has consistently increased throughout the lifetime of the Abstinence Only Education Program. The program for adults is similar to the program for teens in that it stresses the importance of healthy decision-making and attitudes and values that favor abstinence before marriage. High-risk adult programming is different from that for teens to the extent that it emphasizes physical and emotional maturity, addiction to substances and sex, and dysfunctional families. The majority of high-risk adults received the program from the Arizona State University College of Nursing at a rehabilitation center for drug and alcohol abuse; thus, abstinence was addressed along with other programming. Without a comparison group it is impossible to isolate the effects of the abstinence programming from other residential treatment programming.

Programming for high-risk adults is marked by high dropout rates; these rates stem, in part, from the nature of the residential programs, which are time limited and subject to high dropout and termination rates. For instance, 224 adults completed a pre-program survey and 145 completed a matching post-test in Year 2. Similarly, 345 adults completed a pre-program survey and 145 completed a matching post-test in Year 3. Correspondingly, 407 adults completed a pre-program survey and 241 completed the match post-test in Year 4.

Table 4.7 reveals a number of statistically significant changes from pre- to post-test in attitudes and intentions regarding sexuality and premarital sex. Over three years, statistically significant increases were found in value and social relational reasons to stay abstinent, in belief in abstinence, and in rejection of risk-taking behavior. In some areas where a statistically significant difference was not noted, it was due to a ceiling effect. For instance, health reasons to stay abstinent and personal responsibility for sexuality were scored high at pre-test in years 2 and 4, leaving little room for upward change at post-test. The evaluation did not provide follow-up information on how the program may or may not have influenced adults' sexual behavior.

Table 4.7 Statistically significant pre- and post-test differences for high-risk adults

Scale	Year 2 (*N* = 145)	Year 3 (*N* = 145)	Year 4 (*N* = 241)
Health reasons to stay abstinent	No	Yes	No
Value reasons to stay abstinent	Yes	Yes	Yes
Social-relational reasons to stay abstinent	Yes	Yes	Yes
Belief in abstinence	Yes	Yes	Yes
Rejection of risk-taking behavior	Yes	Yes	Yes
Personal responsibility for sexuality	No	Yes	No
Could have a relationship without sex	Yes	Yes	No
Note: No pre-test versus post-test differences were calculated for Year 5 because only post-test data were collected.			

Parents

Abstinence programming for parents focuses primarily on improving parent-child communication about adolescent risk behaviors, including sex. Programming for parents approximates a five-hour, one- or two-day or evening class. The evaluation measured parents' perceptions of program impact. Whether or not parents actually applied the concepts and skills learned in the class, and how such application might ultimately have impacted their children's sexual behavior is not known because there was no post-program follow-up with parents.

The findings support the need for improved communication about sexual matters between parents and their children. The percentage of parents who reportedly did not talk to their child or children within the past 12 months about selected topics is reported in Table 4.8. Over the four years of the program, around one-quarter of parents did not discuss with their children what might be considered the easier sex-related topics, including, for example, how to make healthy decisions, boy/girl relationships in general, and being a teen parent. Proportionately more parents reported never discussing sexuality-related topics, including, for example, wet dreams, masturbation, birth control, and where to go in the community for information or assistance.

Table 4.8 Percentage of parents never discussing surveyed topics in the last year

Topic	Year 1 (*N* = 84)	Year 2 (*N* = 448)	Year 3 (*N* = 293)	Year 4 (*N* = 204)
How to make healthy decisions	12%	27%	18%	20%
Relationships with a girlfriend or boyfriend	19%	36%	30%	24%
Being a teen parent	28%	39%	33%	25%
Peer pressures to have a sexual relationship	23%	43%	39%	28%
How to say no to sex	25%	41%	42%	31%
Reasons to abstain/postpone sexual involvement	16%	41%	39%	29%
Media images of sex and relationships compared to real life	19%	48%	40%	31%
STDs or HIV/AIDS	27%	44%	36%	28%
Menstruation	27%	46%	44%	26%
Difference between having a crush and being in love	28%	45%	32%	28%
How pregnancy occurs	27%	45%	32%	31%
Male/female psychological differences	28%	48%	43%	24%
Birth control	49%	52%	52%	36%
Where to go in the community for information or assistance	62%	54%	60%	33%
Masturbation	64%	79%	71%	53%
Wet dreams	79%	82%	79%	59%

Notes:

More than 84 parents were served in Year 1, but some sites began their programming prior to February 1999 when the parent survey was distributed to the sites.

Year 5 data are not presented because about 75% of the data are missing.

Following the Abstinence Only Education Program, parents were asked to indicate their level of agreement with the four statements presented in Table 4.9. Over 90% of parents in the four years of programming reported feeling more comfortable talking to their child about abstinence until marriage and felt their attitudes and values regarding their children's sexual behavior were clearer after the program than before. Over 95% of parents in each year were reportedly more willing to talk to their child or children about sex after receiving the program. This indicates the program was successful in achieving its designed goal—to increase parents' ability and willingness to communicate with their children about sex.

Table 4.9 The program's reported impact on parents

Item	Year 1 (*N* = 84)	Year 2 (*N* = 448)	Year 3 (*N* = 293)	Year 4 (*N* = 204)
More comfortable talking to child about waiting for sex until marriage	96%	93%	95%	95%
Attitudes and values about child's sexual behavior clearer	93%	93%	95%	95%
More willing to talk to child about sex	96%	95%	95%	98%
Feel child should wait to have sex until marriage	99%	93%	95%	92%

Notes:

The percentages were calculated by grouping positive responses to the questions.

Year 5 data are not presented because about 75% of the data are missing.

Interestingly, from 5% to 8% of parents in years 2 through 4 did not endorse abstinence until marriage for their children. Parent characteristics such as age, sex, ethnicity, virginity at marriage, and self-reported religiosity were not significantly related to the likelihood of supporting abstinence until marriage for one's child. The one factor that was significantly related to this phenomenon, however, was a parent's own personal intentions regarding abstinence. Those parents who did not endorse abstinence for their children were less likely to endorse abstinence outside of marriage for themselves, if they were currently unmarried.[47] This finding is consistent with the literature on single parent families and adolescent sexual behavior (see Appendix C). The attitudes of single parents toward sex are, in general, more liberal than are those of their married counterparts.

In addition to modeling and communicating expectations about sexual behaviors, the literature strongly emphasizes the role of parent monitoring in preventing sexual and other risk behaviors among youths. Anecdotal evidence from participants in the *Not Me Not Now* Abstinence Program in Rochester, New York found that sexual activity takes place during unsupervised hours after school, at large parties, on "dates," or in small gatherings of friends on weekends.[48] In addition, the research shows that it is not uncommon for parents to be unaware of their children's sexual experiences. An examination of data from the National Longitudinal Study of Adolescent Health illustrates this point for youths who by the age of 16 have had intercourse. Seventy-six percent of the parents of mentally disabled boys in this group and 57% of parents of average boys in this group did not know about their sons' sexual experiences.[49] For girls who have had intercourse by age 16, the corresponding findings showed 69% of parents of mentally disabled girls and 47% of the parents of average girls were unaware of their daughter's sexual experiences. Parenting style has also proven

important. Parents who place demands on their children's behavior, who hold them accountable for their actions, and who are perceived as warm and supportive (classified as authoritative parenting) are more likely to be successful at preventing risk behaviors among their children, including sex, than are parents who are classified as authoritarian, indulgent, or neglectful.[50]

Evidence of Effective Program Characteristics

Analysis in Year 2 found that the program characteristics most important in changing short-term outcomes were emphasis on motivational, informational, and skills programs; classes that use a diversity of techniques; use of peer educators; and program dosage. Programs with high informational emphasis were related to more change in sexual efficacy and health reasons to pursue abstinence. In Year 3, the analysis involved testing the effect of different program characteristics on abstinence intentions while holding constant participant characteristics, such as age, gender, ethnicity, free lunch eligibility, number of parents, grade in school, location, prior sex education, religiosity, and pro-social and risk behaviors. Findings showed that those programs that tend to emphasize the health benefits of abstinence tend to increase preteens' intentions to abstain from sexual activity. Teens who had engaged in nonsexual risk behaviors prior to the program tended to show less change in their attitudes towards abstinence and, consequently, less change in their intentions to abstain. In Year 5, multivariate analyses of the impact of program features on stated secondary virginity revealed: 1) personal characteristics such as age, gender, religiosity and dating status are important in determining one's stated intentions about sex such that younger and religious females not currently dating someone are the most likely to stay a secondary virgin or become a secondary virgin; 2) starting a dating relationship is a significant predictor of changing one's mind and deciding to become sexually active after a period of stated abstinence; 3) persons with attitudes showing change favorable to abstinence are more likely to be or become secondary virgins; and 4) when personal characteristics and attitude changes are taken into account, program features do not predict stated secondary virginity status.[51]

Part 5. Participant Satisfaction

Part 5 describes participant satisfaction with the Abstinence Only Education Program. Included in the rating of satisfaction are two groups of stakeholders: the participants in the Abstinence Only Education Program and the administrators of schools where the program was offered in 2000, in 2001 or in both years. Data sources for this chapter include 1) the post-tests of children, preteens, teens, high-risk adults, and parents who were program participants over the life of the program; 2) focus group interviews with youths from select schools that took place in 1999; and 3) a telephone survey of school principals, or their designees, conducted in the fall of 2002.

Summary

Participant satisfaction can be summarized as follows:

- **The majority of all program participants (children, preteens, teens, parents, and high-risk adults) were satisfied with the Abstinence Only Education Program.**
  Statistically significant differences existed in the satisfaction ratings among three subgroups of teens: nonvirgin teens who reportedly did not plan to stop having sex, nonvirgin teens who planned to stop having sex (identified as secondary virgins), and virgin teens. Although all three groups were overall satisfied with the program, sexually experienced teens embracing secondary virginity were significantly more satisfied than their nonvirgin counterparts on nine of the 11 satisfaction items. Not surprisingly, virgin teens were significantly less comfortable asking sex-related questions in class than either group of sexually experienced teens.
- **A majority of teens and high-risk adults reported the program educators placed too much emphasis on the discussion of right and wrong.**
  The federal program criteria A through H (see Appendix A) can be considered prescriptive in their direction for promoting abstinence until marriage, and supporting mutually faithful monogamous marriage. An examination of the different abstinence-only curricula makes it is easy to see that some are more prescriptive in content than others. Over the first four years, some 83% of teens

and 64% of high-risk adults reported a perception that the Abstinence Only Education Program teachers talked too much about what was right and wrong.

- **Students participating in the focus group interviews reported preferences for abstinence-only education to be delivered in small group classes and for discussion and activities to be used instead of lectures and videos**.

- **A majority of school administrators surveyed said they believed parents supported the program**.

  A total of 98 school administrators responded to the fall 2002 survey of school principals—the School Stakeholder Survey; this number represented 51% of the schools contacted for participation. School administrators reported their perception that the majority of parents routinely consented to their children attending the Abstinence Only Education Program. A majority of school administrators, 83%, also reported perceiving 1) that the program reflected what most parents thought should be taught and 2) that about one-half of the parents from whom they had received feedback were very satisfied with the program.

- **In many schools, parent participation in the Abstinence Only Education Program was minimal.**

  Approximately 52% of school administrators reported that parents had been involved in making decisions regarding whether or not the program should be offered. Only 40% of school administrators reported that they had received some type of feedback from parents expressing needs or concerns about the program. As few as 1,106 parents took part in an Abstinence Only Education class over the five program years, which contrasts with 88,891 children in grades 4 through 12 who took part.[52]

- **Respondents to the School Stakeholder Survey rated perceived satisfaction and support for the Abstinence Only Education Program among teachers, school boards, and PTAs as very high.**

  For example, school administrators considered 93% of teachers to be *very* to *somewhat satisfied* with the program. Regarding school board and administration officials, survey respondents considered 85% to be *very* to *somewhat supportive* of the program. On this point, 14% of respondents were uncertain about the level of support. Some 45% of respondents rated Parent Teacher Associations (PTAs) as *very* to *somewhat supportive* of the program while 2% rated PTAs as *not supportive.*

Over half of the School Stakeholder Survey respondents (53%) were uncertain about the level of PTA support.

- **The majority of School Stakeholder Survey respondents planned to continue the Abstinence Only Education Program.**
  From 1998 to 2002 the program was offered in a growing number of schools each year. The School Stakeholder Survey revealed a current overall rate of program retention in schools of 81% (the program was retained at 79 of 98 schools). Of the 98 schools represented in the survey, 72% (71 schools) planned to continue the program in the next year, 19% (19 schools) had already discontinued it, another 4% (three schools) were planning to drop the program in the next year, and the program's future was uncertain in 6% of the schools (five schools). Notably, perceived dissatisfaction among teachers and a lack of perceived student support for the program were the only factors among several examined that were significantly related to discontinuation of the program within schools or uncertainty about its future. Given that the response rate to the School Stakeholder Survey was 51%, the findings on retention should not be generalized beyond the schools of those school administrators responding to the survey.

Recommendations

These recommendations have been derived from the experiences of the Abstinence Only Education Program administrators and program contractor staff in implementing the program over the five years. The recommendations encompass important lessons learned and should be considered in ongoing or future implementation of abstinence-only programming. Recommendations are as follows:

- **Strategies should be adopted to engage those individuals who are not initially receptive to the idea of sexual abstinence until marriage.**
  For instance, avoiding an emphasis on early conversion to the program's message in favor of the initial development of supportive relationships and addressing participants' personal goals has been shown to improve engagement and retention and to reduce defensiveness in areas such as substance abuse treatment.[53] In other words, despite one's stance on abstinence until marriage, the program has something to offer to everyone, and it is important the educator answer the question "what's in it for me?" at the beginning.

- **The sensitive content in the Abstinence Only Education Program requires program contractors to employ educators who have excellent communication skills.**
  Educators must be prepared to deal with sensitive topics, questioning attitudes, and challenging behaviors in a highly professional and respectful manner.

- **Educators should continue to find ways to address abstinence until marriage in a non-judgmental and credible way.**
  Educators should proactively address the contradictions that arise between program content and students' real life experiences, e.g., nonmarital birth, teen pregnancy, sexual identity, and sex outside of marriage. Students' comments from the focus groups suggest that they dislike educators labeling or generalizing that individuals were "bad" for having sex before marriage and that nonmarital birth is necessarily associated with negative consequences. Although the program takes a firm stand on abstinence until marriage and heterosexual relationships, nonjudgmental ways for educators to present the material and respond to students should be explored.

- **Educators should strive to deliver the program in small group formats using discussion and experiential methods rather than lecture and video.**
  Students prefer that the program be delivered in small group classes outside of physical education. Discussion and activities are preferred over a reliance on lecture and video. Generalizations, labeling, stereotypes, and scare tactics should be avoided and real-life examples should be used to build educator and program credibility.

- **Programs should ensure students have a variety of resources and ways to get their questions answered.**
  Students who may be uncomfortable asking questions in class need an opportunity to have their questions and concerns addressed in a confidential and private manner. For example, one contractor reported offering students a question box where they could place questions that the educator would address in the following session. Students should be made aware of counseling resources in the school and community so they can comfortably access them if needed.

- **Teaching materials should be tailored to individual classes so that they are age and developmentally appropriate.**
  Teaching materials should be current and designed to appeal to youth. In some

schools, some videos used were old and outdated while other videos were reported to have been very effective and well received. In schools that offer the program across multiple years, planning should address how to make the program new and interesting, e.g., provide different activities for various cohorts.

- **Fostering involvement and providing opportunities for meaningful exchange among school administrators, teachers, parent and community groups is recommended.**
  Inclusion tends to foster a sense of ownership and support that could improve continuity of the abstinence message in the home and community and build commitment to the program in the school. Sharing outcome data on the program with these groups could also help develop interest and a supportive base.

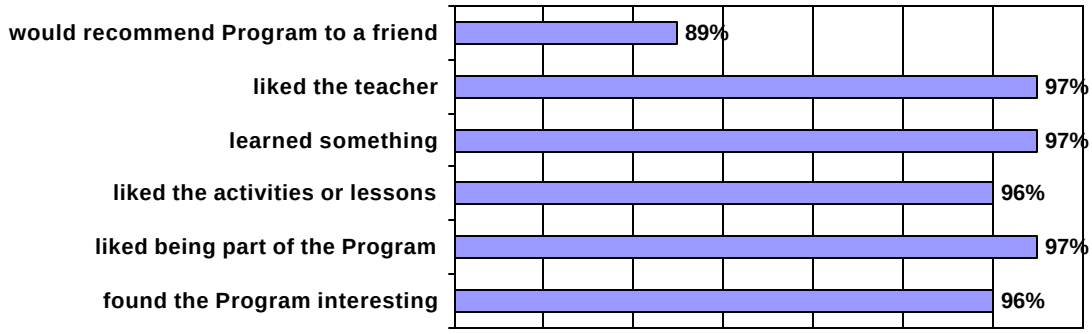
Participant Satisfaction

Findings on program participant satisfaction are presented separately for children in grades 4 through 6, teens in grades 7 through 12, parents, and high-risk adults, i.e., adults in residential substance abuse facilities, adult homeless shelters and jails.

Children

The post-test survey asked children in grades 4 through 6 to rate their satisfaction with the Abstinence Only Education Program by responding to six questions. The questions were answered on a four-point scale with higher scores indicating greater satisfaction. The response rate to the children's satisfaction questions in Year 4 was 83%.[54] Some 86% of the 3,208 children completing the post-test were in grade six, 13% were in grade five and less than one percent of the children were in grade four. Overall, children were very satisfied with the Abstinence Only Education Program in Year 4 (see Figure 5.1).[55] Fewer satisfaction questions were asked on the post-test surveys in Year 5. Of the 6,808 children in grades 5 and 6 who responded to the survey in Year 5, 97% reported liking being part of the program at least a little.

Figure 5.1 Children's satisfaction with the Abstinence Only Education Program (*N* = 3,208)



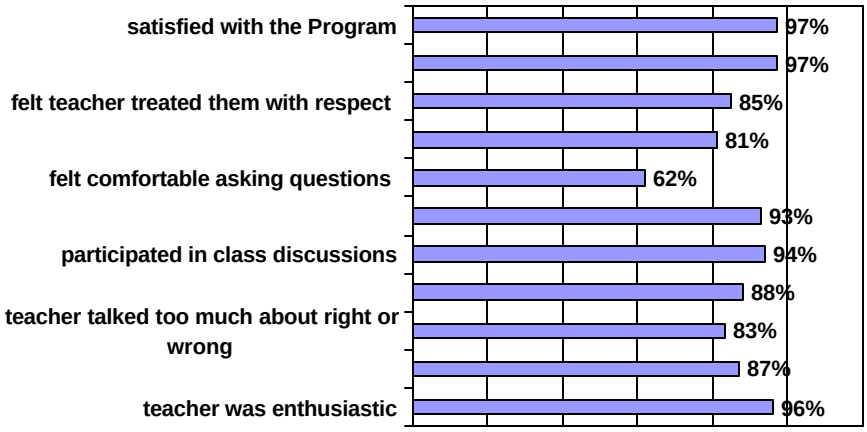
Preteens and Teens

In 1998, five focus groups were conducted with preteen and teen participants from Coconino, Pinal, and Pima County program sites. In general, the focus group discussions revealed that teens struggled with the perceived contradictions between the program and their life experiences. For instance, teens talked about how being a teen parent should not be considered "*bad*" and some shared that their own parents had become pregnant as teens and they saw firsthand that their lives were not associated with negative consequences. When asked what they liked about the Abstinence Only Education Program, teens in the focus groups mentioned the small group format and sharing with their peers, the use of true stories and real life examples, opportunities to talk in a safe and non-judgmental environment, discussion about relationship boundaries and peer pressure, interactive games and activities, and information on testing for HIV/AIDS. Teens in the focus groups said they did not like large group classes, teachers who lectured or preached, teachers who gave false or misleading information, boring movies, the blaming of drugs and alcohol for increased sexuality, and information not geared to their ages.

Information on teen satisfaction with the Abstinence Only Education Program is also available from the post-test surveys. During their final session of the Abstinence Only Education Program, teens were asked to respond to 11 satisfaction questions. Their responses were recorded on a scale from 0 to 4, with higher scores representing greater satisfaction. Teens were surveyed across six settings: schools, after-school, community, probation, detention and residential treatment centers.

Satisfaction information is reported in Figure 5.2 for teens, grades seven through 12 for Year 4 of the program.[56] The response rate to the post-test in Year 4 was 95% with 11,767 of 12,372 teens responding. The majority of the respondents received the Abstinence Only Education Program in school (94%), four percent were in detention or residential treatment centers, and the remaining two percent were divided among after-school, community, and probation settings. In Year 5, fewer satisfaction-related questions were asked on the post-test survey. Of the 15,620 teens responding in Year 5, a large majority were overall satisfied with the program.

Figure 5.2 Preteens' and teens' satisfaction with the Abstinence Only Education Program (*N* = 11,767)



Contrasting Subgroups of Teen Program Participants

Several studies of Abstinence Only Education Programs have drawn comparisons between virgin and nonvirgin teens.[57] An examination of the teen post-test data for Year 4, however, reveals that the nonvirgin teens were not a homogenous group. In fact, the teen subgroup *most satisfied* with the Abstinence Only Education Program was nonvirgin teens; teens in this group reported that they planned to stop, or had already stopped having sex at post-test (a phenomena known as secondary virginity). The results of the teen post-test survey, which included 11 satisfaction items, are shown in Table 5.1. The analysis includes the 9,653 nonmarital teens who received the Abstinence Only Education Program in school. Of this number, 82% were self-reported virgins. Of the remaining 18% (1,777 teens who reported having

experienced sexual intercourse), 54% were planning to continue having sex and 46% were planning to stop. Independent t-tests on the nonvirgin subgroups revealed statistically significant between-group differences on nine of the 11 satisfaction items, with secondary virgins reporting greater satisfaction than their nonvirgin counterparts. A statistically significant between-group difference also appeared for the question regarding comfort with asking questions about sex, with virgin teens reporting less comfort than either group of nonvirgin teens.[58] Only one of the 11 satisfaction items–"*Did the teacher talk too much about what was right and wrong*?"–did not produce any statistically significant between-group differences. The majority of all teens (approximately 80% of each subgroup) responded that the teacher talked too much about what was right and wrong.

Table 5.1 Mean satisfaction responses by sexual experience and intent

	Nonvirgins		Virgins	Total
Satisfaction item	**Continuing sex (*N* = 967**	**Secondary virgins (*N* = 810)**	**(*N* = 7,876)**	**(*N* = 11,767)**
Teacher enthusiastic teaching course	3.3	3.5**	3.2	3.2
Teacher comfortable discussing sexuality	3.5	3.6**	3.5	3.5
Teacher talks too much about right and wrong	2.2	2.3	2.3	2.3
Teacher talks at a level understood	3.4	3.6**	3.5	3.5
Participated in class discussions	2.9	3.1*	2.9	2.9
Participated in group discussions	2.9	3.1*	2.9	2.9
Felt comfortable asking sex-related questions	3.0	2.9**	2.7	2.8
Allowed to have different opinions and values	3.3	3.5*	3.3	3.3
Treated with respect when disagreed	3.3	3.6**	3.5	3.4
Class materials clear and useful	3.3	3.5**	3.4	3.4
Overall satisfied with the program	3.2	3.5**	3.4	3.4

Notes:
The first three columns include only nonmarital teens that received the Abstinence Only Education Program in school.
Means are calculated on a five-point scale from 0 to 4 with higher scores representing greater satisfaction.
ANOVA tests revealed statistically significant between-group differences on 10 of the 11 items, subsequent t -tests for independent means were used to ex amine the statistical significance of the between-group differences for nonvirgins planning to continue having sex and those planning to stop.
* denotes p. < 0.01, ** denotes p. < 0.0001

In Year 4, the program also served 462 teens on probation or in detention or residential facilities. Information on sexual experience was available for 409 of these teens, with 76% of the males and 79% of the females reporting having experienced sexual intercourse. The overall mean satisfaction rating given to the program by these youths was 3.1 on a scale of 0 to 4, slightly lower than the other subgroups of

teens receiving the program in school. The 110 after-school participants and the 204 community participants in Year 4 had average overall satisfaction scores of 3.5 and 3.4 respectively. These average satisfaction scores were consistent with those of other subgroups of school-based teens, as shown in Table 5.1.

Parents

Very few parents received the Abstinence Only Education Program relative to the number of children and teens, and the number of parent participants decreased in Year 4 and Year 5.[59] The majority of parents who participated in the Abstinence Only Education Program, however, gave the program high marks for delivery and content and were overall very satisfied. Parents' responses to three satisfaction items were recorded on a four-point scale, with higher scores indicating greater satisfaction. Over the five years of the program:[60]

- 99% of parents in each year agreed that the program leader was comfortable discussing sexuality.
- A minimum of 94% of parents in each year found the class materials clear and useful.
- From 96% to 100% of parents reported overall satisfaction with the parent portion of the Abstinence Only Education Program.

High-Risk Adults

Adults receiving the Abstinence Only Education Program in residential substance abuse facilities, adult homeless shelters and jails were also asked to rate their satisfaction with the program. Their responses were recorded on a five-point scale, with higher scores indicating greater satisfaction. Highlights from five satisfaction-related questions over the five years of the study were as follows:[61]

- At least 91% of adults reported the leader was comfortable discussing sexuality.
- From 86% to 92% of adults reported the class materials were clear and useful.
- At least 66% of adults reported being comfortable asking any questions they had about sex.

- From 62% to 65% of adults reported that the teacher talked too much about what was right and wrong.
- Between 85% and 92% of adults reported being overall satisfied with the program.

School Administrators

A telephone survey of principals in Arizona schools hosting the Abstinence Only Education Program during the 2000 and/or 2001 academic years (the School Stakeholder Survey) was conducted in November 2002. A total of 189 school administrators were asked to respond to the survey and of these 98 agreed, yielding a 51% response rate. Given this relatively low response rate, these findings should not be generalized beyond the schools represented by the survey respondents. Although school principals were the target respondents for the survey, each was given the option to designate as a respondent another school staff member knowledgeable about the program. Of the 98 respondents, 55% were school principals or directors, 6% were vice principals or assistant directors, 16% were teachers, 7% were counselors, 10% were school nurses, and 5% were some other type of school staff.

Background on the Schools Represented in the Survey

Of the 98 schools represented in the survey, 82% were public, 6% were private, and 12% were charter. Of the 98 schools represented in the survey, the percentages located in urban versus rural settings were very similar (52% and 48%, respectively). However, across the entire sample of 193 schools, 56% of all rural schools contacted completed the survey while only 45% of all urban schools contacted completed the survey.[62] Of the 98 schools represented in the survey, 18% were very large with over 900 students while 82% had enrollments of 900 or fewer students (of these, 19% were smaller schools with less than 300 students, 34% were midsize schools with 300 to 600 students, and 29% were larger schools with 600 to 900 students). A full range of grade levels were represented in the 98 respondent schools, with the most common grade-level ranges as follows:

- Kindergarten through fifth grade (15%).
- Kindergarten through sixth grade (15%).
- Kindergarten through eighth grade (19%).

- Sixth through eighth grade (17%).
- Ninth through twelfth grade (20%).
- Some other range of grade levels (13%).

The majority of the 98 schools represented in the survey (72%) did not offer any type of sex education other than the Abstinence Only Education Program, either currently or in the past. Of these surveyed schools, 33% offered the Abstinence Only Education Program in only one grade level, 31% offered it in two grade levels, 23% offered it in three grade levels, 9% offered it in four grade levels, and 4% offered it in five grade levels.

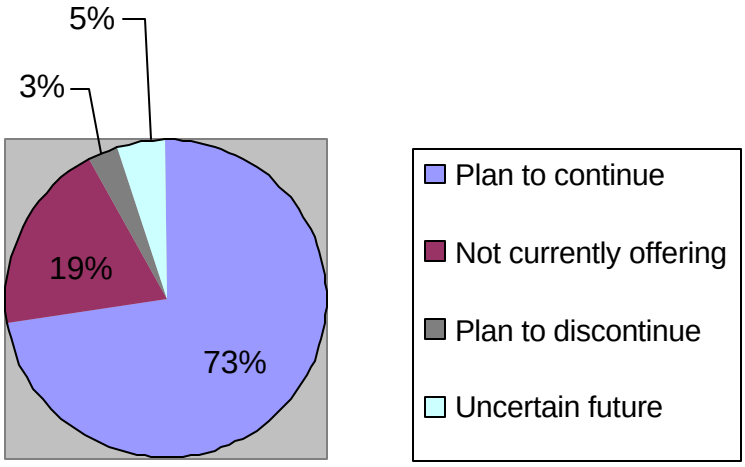
Status of the Abstinence Only Education Program in the Schools

Of the 98 schools represented in the survey, 79 schools (81%) were currently offering the Abstinence Only Education Program and 19 schools were not. Of the 79 schools offering the program at the time of the survey, 76% had an active, as opposed to passive, permission policy that required parents to sign a permission slip to enable their children to participate. Moreover, a *majority* of parents reportedly allowed their children to participate in the Abstinence Only Education Program, with 85% of the school administrator respondents estimating that fewer than 10% of parents refused to allow their children to participate.

Future Plans for the Abstinence Only Education Program

At the time of the School Stakeholder Survey, 79 of the 98 schools surveyed were offering the Abstinence Only Education Program. These findings reveal a current overall retention rate of 81%. Among the 79 schools that were offering the program at the time of the survey, 71 schools planned to continue the Abstinence Only Education Program in the next year, three schools planned to drop the program and five schools reported uncertainty about the program's future (see Figure 5.3). Continuation of the program was not related to either the type of school, e.g., public, private or charter, or the grades in which abstinence-only education was taught.

Figure 5.3 Future plans for the Abstinence Only Education Program (*N* = 98)



The main reasons given by the 22 school administrators for discontinuing or planning to discontinue the Abstinence Only Education Program included (responses are listed in descending order of frequency):

- Reasons outside the school's control (e.g., funding ran out, the agency did not come to complete the classes, the program was discontinued and never returned, the school district adopted another program to implement district wide).
- Administrative or logistical reasons within the school (e.g., staff changes, time constraints, need to focus more on academics).
- No specific reason (vague reason or difficult to interpret reason).
- General feelings or statements of unhappiness with the program.
- Feelings that the program was inappropriate for the targeted age group.

Reasons given by the 71 respondents for continuing the Abstinence Only Education Program included (responses listed in descending order of frequency):

- Specific benefits for students provided by the program (e.g., improves decision making, teaches how to avoid peer pressure, exposes kids to benefits of abstinence, provides information on STDs and pregnancy issues).

- Expressed need for the program (e.g., program is very much needed, high number of girls/students sexually active, kids don't receive information at home, high teen pregnancy rate).
- Positive response to the program or positive feedback received from students and other stakeholder groups, such as parents, teachers, and the community.
- General positive feelings toward and praise for the program.
- The manner or timing in which the program was presented (e.g., program addresses issues in appropriate way, program offered at a time when students need it).
- The program's fit with the school's current curriculum or philosophy.
- The program was mandated.

Most respondents indicated that the Abstinence Only Education Program was either *very* (41%) or *somewhat* (44%) *well integrated* into their schools' regular health education programming. Of the respondents at the 71 schools planning to continue the Abstinence Only Education Program, 2% reported their schools did not offer health education and 4% were unsure of the degree to which the Abstinence Only Education Program was integrated into their school's regular health education curriculum. Few (8%) felt that the Abstinence Only Education Program was *not well integrated* into their schools' regular health education programming. Additionally, in 94% of the 71 schools planning to continue the Abstinence Only Education Program, respondents indicated their intent to make abstinence-only programming part of the regular health curriculum.

Participation in Decision-making

Respondents were asked whether they and/or other school staff had participated in making decisions regarding what topics to cover in the curriculum of the Abstinence Only Education Program. Of the 98 respondents, 45% indicated that they had personally participated in making such decisions and 51% indicated that other school staff had participated, either in addition to or instead of themselves. Other school staff included the school's principal or director (18%), the vice principal or assistant director (9%), teachers (46%), school counselors (6%), school nurses (8%), school board members (5%), and school district representative (1%).

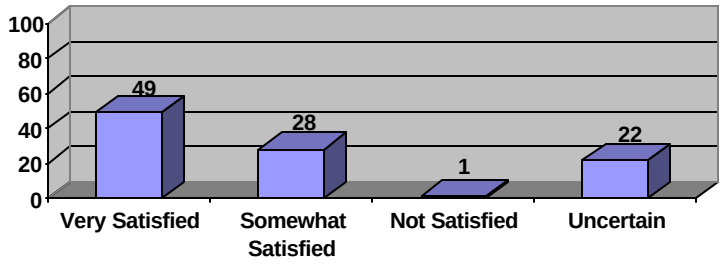
Respondents were also asked to estimate the total number of parents at their schools who had actually participated in a formal meeting about whether abstinence-only programming should be offered. Over one third of respondents (38%) indicated they were not sure of the number of parents who participated in such a meeting at their schools and, therefore, did not offer an estimate. A significant number of respondents (24%) indicated that no parents participated in any such meeting. Another 21% of respondents indicated that 10 or fewer parents participated, while 11% of respondents indicated that 11 to 35 parents participated. Only 6% of respondents indicated that 70 or more parents participated in a meeting. When respondents were asked for their opinions about the degree to which the abstinence-only curriculum reflected what parents thought should be taught to their children, 83% reported feeling that the curriculum reflected what most to many parents thought should be taught. In contrast, 13% of respondents reported feeling that the curriculum reflected only what some or a few parents thought should be taught. Only 4% of respondents reported not being sure how closely the curriculum reflected what they felt parents thought should be taught.

Respondents were asked if any discussion of sex education had occurred within the past two years at meetings of their school boards or PTAs or at any other public meetings. Some 31% of respondents reported discussion of whether or not to teach sex education; 22% reported discussion of what topics should be taught; 41% reported discussion of teaching *abstinence only*; 35% reported discussion of whether classes should be single-sex or co-ed; and 39% reported discussion of how parents should give permission for their children to be included in or removed from sex education.

Perceived Satisfaction of Parents

Respondents were asked about their perceptions of parents' overall satisfaction with the program based upon the feedback their schools had received. Almost half (49%) indicated feeling that parents were *very satisfied*, 28% indicated feeling that parents were only *somewhat satisfied,* and only one respondent indicated feeling that parents were *not satisfied* (see Figure 5.4). Notably, 22% indicated uncertainty regarding parental satisfaction. Perceived parental satisfaction was not significantly related to plans for continuing the Abstinence Only Education Program in the coming year.

Figure 5.4 Percentage distribution of perceived satisfaction among parents (*N* = 98)



Many respondents (40%) indicated that their schools had received some type of feedback from parents regarding their needs and concerns about the Abstinence Only Education Program (it is unknown how many parents provided feedback). Of the comments respondents received from parents, the following general themes were noted (responses listed in descending order of frequency):

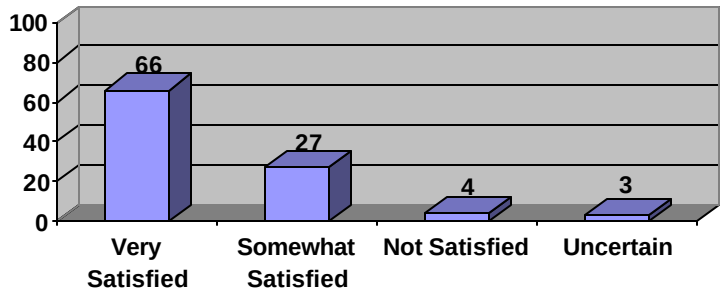
- Parents' preference that the schools not address sexuality issues, that instead these be addressed within the family, and that their children not be involved in the program (religious concerns were sometimes noted in this regard).
- Parents expressed no complaints and/or no praise for the program.
- Parents' desire for more information about the Abstinence Only Education Program (e.g., desire for a meeting about the curriculum, desire for clarification about the program, an expressed lack of understanding of why birth control information is included in abstinence-only programming).
- Parents' feelings that the curriculum was not age appropriate (e.g., concern that material is inappropriate for the age of the children, a feeling that seventh grade is too early for the program, concerns about the child being ready for the program).
- Parents' desire for more involvement, input, and control (i.e., parents expressed wanting more access to teaching materials, to be present in class, to have more options available to for parents).
- Disagreement specifically with the abstinence-only curriculum/philosophy (e.g., wanting to have more information taught on birth control in addition to the

abstinence message and a general disagreement with the abstinence-only message)

Perceived Satisfaction Among Teachers

Regarding perceived teacher satisfaction with the Abstinence Only Education Program, 66% of school administrator respondents indicated feeling that teachers were *very satisfied,* 27% felt that teachers were *somewhat satisfied,* 4% felt that teachers were *not satisfied,* and 3% were uncertain (see Figure 5.5). No indication was given as to what leads to teachers' feelings of satisfaction or dissatisfaction. Perceived teacher satisfaction was, however, significantly related to plans for continuing to offer the Abstinence Only Education Program in the following year. Respondents who reportedly felt teachers were less than very satisfied or who were uncertain about teachers' level of satisfaction were more likely to report discontinuing the program or uncertainty about the program's future (X^2 = 5.5, *df* = 1, 0.02).

Figure 5.5 Percentage distribution of perceived satisfaction among teachers (*N* = 98)



Perceptions of Support from School Administration Groups

When school administrators were asked to rate the level of support for the Abstinence Only Education Program from Parent Teacher Associations (PTAs), 45% of respondents rated PTAs as very or somewhat supportive and 2% rated PTAs as not supportive. Over half of the respondents (53%) were uncertain about PTA support. Schools boards and administrations were rated as very to somewhat supportive by 85% of respondents; only 1% of respondents rated schools boards and administrations as not supportive. Some respondents (14%) were uncertain about the level of school board and school administration support at their schools.

Perceived Value Added by the Abstinence Only Education Program

Of the 98 surveyed schools, 25% had offered, or continued to offer other sex education programming in addition to the Abstinence Only Education Program. Respondents from these schools were read a list of 13 topic areas and asked for their perceptions of the value added in each area to their school's other sex education curriculum by the Abstinence Only Education Program. The 13 topic areas were:

- Health benefits of abstinence.
- Personal benefits of abstinence.
- Sexual anatomy.
- The puberty process.
- The biology of reproduction.
- STD/HIV information.
- Issues of sexual harm such as date rape, sexual harassment, and pornography.
- Healthy romantic relationships.
- Benefits of marriage skills to refuse sexual advances.
- Skills for making good decisions.
- Identifying personal strengths and building self esteem.
- The importance of relationships with parents, friends, etc.
- The influence of the mass media on how we view sex and relationships.

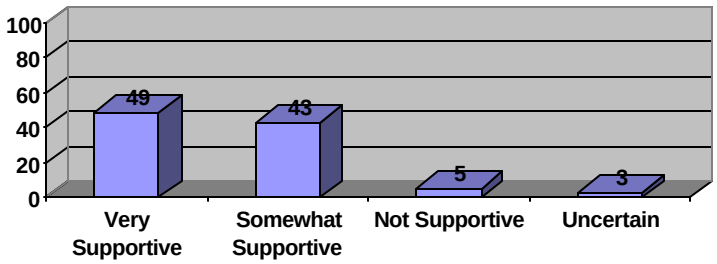
A large majority of respondents (70% or more) indicated that the Abstinence Only Education Program added *some* to *a lot* of value to their school's other sex education curriculum in 11 of the 13 areas. The two exceptions were sexual anatomy and the biology of reproduction, for which a smaller majority felt the Abstinence Only Education Program added *some* to *a lot* of value (54% for each topic area). The same list of 13 items was again presented to respondents and they were asked how much value their school's other sex education curriculum added to the Abstinence Only

Education Program. The vast majority of respondents (70% or more) stated that their school's other sex education programming added *some* to *a lot* of value to the Abstinence Only Education Program in each of the 13 areas. Based on these results, it appears that both the Abstinence Only Education Program and other sexual education curriculums of these schools were complimentary to one another and that perhaps, for these schools especially, the integration of the Abstinence Only Education Program into the schools' regular curriculums would be warranted.

Perceptions of Support Among Students

Overall, 92% of respondents rated students as *very* or s*omewhat* supportive of the Abstinence Only Education Program; in contrast, 5% rated students as *not supportive* (see Figure 5.6). Three percent of respondents indicated uncertainty about students' support level. Perceived support among students for the Abstinence Only Education Program was significantly related to plans for continuing the program in the following year. Respondents who reported students were less than very supportive or who were uncertain about student support were more likely to report plans to discontinue the program or uncertainty about its future in the coming year ($X^2 = 7.9$, $df = 1$, $p. = 0.005$).

Figure 5.6 Percentage distribution of perceived support among students (*N* = 98)



Perceived Impact on Students

Respondents were asked to provide feedback on what they perceived as the benefits and problems incurred by students as a result of the Abstinence Only Education Program provided at their school. The following five themes were derived from the

responses regarding benefits to students (responses are listed in descending order of frequency):

- The program provided students with needed tools and information (e.g., cleared up students' misconceptions by providing up-to-date information; provided students with tools to navigate relationships with the opposite sex and peers—including skills to handle sexual advances; provided tools for good decision making as well as information on the consequences of poor decisions; provided information about STDs; provided information on the benefits of abstinence; etc.).
- Nothing specific noted (no answer given; vague answer; difficult to interpret response).
- The program facilitated the development of students' personal values and growth (e.g., helped students build self-esteem, confidence, and respect; helped students gain better self-understanding; helped students develop respect for others).
- The program provided a positive environment for students and facilitated role-modeling behavior among students (e.g., a good core of young people were involved; students spread the message themselves; the environment was positive and fostered positive attitudes).
- The program had a direct impact (e.g., reducing pregnancy rates).
- The program facilitated enhanced communication and understanding (e.g., opened up student-parent communication; informed teachers of student questions; enabled students to discuss issues more freely).

Most comments made by respondents regarding perceived problems students incurred from the Abstinence Only Education Program fell into the following six areas (responses are listed in descending order of frequency):

- No problems developed.
- The program gave students mixed messages, caused confusion, or did not present students with all the options (e.g., the program caused guilt if a student was pregnant; confusion and questions remained after the program or were caused by the program; all options were not presented).

- Nothing specific noted (no answer given; vague answer; response difficult to interpret).
- Time and development issues existed that affected students (e.g., the program was not fully developed; the program should continue rather than be a one-time occurrence; not enough time was devoted to the program; time was taken from regular classes because of the program).
- The program had no impact or was not taken seriously by students (e.g., classes were ignored or not taken seriously; sexual activity continued or increased).
- Some students developed behavioral issues (e.g., students began challenging each other in class; some students poked fun and teased).
- Issues involving parents affected students (e.g., because some parents would not give permission, not all students participated and so students wondered why some peers were taking the class while others were not; some parents felt the class would encourage sexual activity).
- Age appropriateness issues existed (e.g., some felt the class was not appropriate for seventh grade; some students felt they were too young for the content that was presented).

Suggestions for Program Improvement

Respondents to the School Stakeholder Survey provided the following suggestions as ways to improve the Abstinence Only Education Program (responses are listed in descending order of frequency):

- Nothing specific noted (vague response; response difficult to interpret; response was not a suggestion but rather, for example, a statement of praise for the program).
- Comments and suggestions regarding format and target audience (e.g., extend or shorten the program; provide follow-up activities and booster sessions to make the program more continuous and potent; offer the program several times a year; increase integration of the program and/or include the program as part of a regular curriculum; have program sessions occur on consecutive days and/or schedule sessions more consistently; have regular teachers present during program

sessions; provide more facilitators or better quality facilitators; implement the program at an earlier or later age; individualize the program to meet needs and/or make sure it is age appropriate for the audience; add a program for children with special needs; start or focus the program at some other suggested grade level).

- Continue or expand the program (e.g., increase funding; continue and/or expand the program).
- Comments or suggestions regarding content (e.g., provide more information on: birth control, STDs, biology and physical development, sexual harassment, abstinence from drug use, decision making and consequences of poor choices, appropriate dress and conduct, and realistic goal setting; integrate more spirituality into the curriculum and/or better take religious beliefs into account; desire for more updated information, including updated videos and pamphlets; provide more variety in the curriculum).
- Comments or suggestions expressing a need for more information or education about the program: in general, for specific stakeholder groups, and for continued or increased involvement of particular stakeholder groups (e.g., provide program materials directly to schools; provide or continue to provide information on the program and program content to schools, the community, and parents; get parents more involved; have schools and parents continue team-work efforts).
- No suggestions; the program is fine as is.
- Provide more outcome data or more sharing of information on program outcomes (e.g., fill the need for something with which to compare the program; meet to discuss results or outcome information).

Part 6. The Media Campaign

Part 6 of this report addresses the media and public relations services provided by Cooley Advertising (formerly Winward Cooley Advertising and Public Relations). The evaluation questions include the following: 1) How did the media campaign promote the message of abstinence until marriage as the safest and most viable lifestyle choice? 2) Did the media campaign influence youths' perceptions on abstinence? 3) Did the media campaign motivate youths to talk to someone about abstinence or to seek more information? and 4) How satisfied were the program contractors with the public relations support they received from Cooley Advertising? Data sources used to answer these questions included:

- Documentation provided by Cooley Advertising and the ADHS over the life of the program.
- Telephone surveys of randomly selected adolescents, 12 to 18 years of age, conducted each spring from 2001 through 2003.
- Annual survey results (1999–2002) from youths who received the Abstinence Only Education Program in school.
- Two satisfaction surveys of Abstinence Only Education program contractors administered in 1999 and 2000.

Summary

This part of the evaluation is summarized as follows:

- **Arizona is one of 27 states nationwide that included a media campaign as part of its Abstinence Only Education Program, and one of only four states that had as its key message *abstinence only until marriage*.**
- **The media campaign relied primarily on television ads, and also utilized radio, a website, bus benches, posters, billboards, and creative contest competitions.**

  ADHS contracted with Cooley Advertising to promote the abstinence-only message to parents and children statewide at a cost of $5,616,160 over five years. The use of public service announcements, donated airtime on radio and

television, and local press releases made a significant in-kind contribution to the media budget.

- **The media and targeted portion of the Abstinence Only Education Program were successfully integrated.**
  These components complimented one another and worked together as one program with a common goal. Cooley Advertising did this by providing public relations support to the statewide program contractors, seeking program contractors' input on the media campaign, and keeping program contractors informed. The program contractors were highly satisfied with the timeliness and content of the public relations support provided by Cooley Advertising and used the television ads to support the abstinence-only curriculum. In Year 5, 73% of preteen and teen program participants reported that they saw an abstinence-only television ad in the classroom.

- **The media campaign ensured statewide coverage of the abstinence-only message.**
  Rural areas of the state were reached via cable and radio ads, and print ads in local newspapers. In addition, Cooley Advertising developed and maintains a toll-free hotline, 1-888-844-WAIT, and the ADHS website, www.sexcanwait.com.

- **For the past four years, Cooley Advertising has exceeded the state unaided recall rate objective for television ads.**
  Unaided recall of television ads remained above 80% for the past three years. As intended, the primary message recalled by respondents was *marriage before sex*. The ads that respondents remembered the most were perceived as realistic and relevant to their life experiences.

- **About 20% of teens who recalled an abstinence ad reported talking with someone, primarily friends or parents, about the message of the ad(s).**
  Over the past three years, the proportion of respondents choosing a parent to talk with decreased, while the proportion choosing friends to talk with increased.

- **Almost 90% of those surveyed thought teens would agree with the idea of sexual abstinence after seeing the television ads.**
  Fifty to 60% of respondents reported similar points of view with regard to the radio ads. In Year 5, 81% of preteen and teen *program participants* who saw an abstinence ad reported they felt more like waiting to have sex after seeing the ads.

- **Website and toll-free hotline contacts have increased over the life of the Program.**
  However, the media campaign did not appear to motivate respondents to go to the website (www.sexcanwait.com) or call the toll-free hotline (1-888-844-WAIT) to seek more information. The percentage of respondents who reported going to the website or calling the hotline in response to seeing or hearing an abstinence ad ranged from about 2% in Year 1 to about 5% in the final year of the media campaign.

Recommendations

These recommendations have been derived from the experiences of the Abstinence Only Education Program administrators and program contractor staff in implementing the program over the five years. The recommendations encompass important lessons learned and should be considered in ongoing or future implementation of abstinence-only programming. Recommendations are as follows:

- **The development of media ads should continue to include input from consumers and program contractors**.
  The integration of suggestions from program participants and program contractors in the past have made the television and radio ads more inclusive of teen males and more reflective of the cultural diversity that defines Arizona. The program contractors perceived that they had meaningful input into the development of the ads and many used the ads to supplement the abstinence-only curriculum.
- **The reasons for the success of ads with high aided recall rates should be considered when developing future creative concepts**.
  Five of 15 television ads consistently had aided recall rates above 50%: *Words, Backpack*, *Wedding Cake*, *STD Book/Ritual*, and *Oh Baby.* These ads were to the point, creative in their mix of humor and truth, and used visual and audio association.
- **Television ads should be placed on channels near or during television programs that the targeted audience tends to view the most**.
  For example, Arizona youths prefer channels such as MTV and the Warner Brothers Network; young males prefer shows such as *The Simpsons* and sports

programming while young females prefer *Friends.* Recent studies have shown that television violence may impair memory for advertisements.[63] These findings suggest that sponsoring violent programs might not be effective and that future media campaigns, in order to maximize recall, should select shows and channels that are popular among youths but that feature little or no violence.

- **Future ads could include a stronger message motivating youths to discuss abstinence and seek more information, particularly with their parents.**

  The ads motivated only about one in five respondents to discuss an ad's message; those most likely to be the target of such communication were friends. A fairly small percentage of survey respondents reported calling the toll-free hotline or visiting the abstinence website for more information in response to seeing or hearing the ads. Given the intent of the media campaign was to motivate youth to communicate with their parents about abstinence, then the ads could directly state "talk to your parents about abstinence." The advertising of incentives, such as an interactive CD, appears to have motivated greater access to the toll-free hotline and website.

- **Future media campaigns should more specifically target parents and their role in preventing sexual behavior.**

  Parent involvement may be an important factor in a youth's acceptance and retention of the abstinence-only message. Four of the abstinence television ads were aimed at parents and the website and toll-free hotline both have information designed specifically for parents; the inclusion of information aimed at parents indicates to youth the expectation that parents should be involved with their children in talking about abstinence and monitoring behavior. To appropriately intervene it is important to assess how prepared parents generally feel to discuss abstinence and carry out their role.

- **The media campaign of the Abstinence Only Education Program accounted for about one-third of the Program budget (about $5.5 million over five years)**.

  Future evaluation of the media campaign should consider: 1) Does contact with the website and toll-free hotline vary with the intensity of the ad campaign? and 2) Does a difference in awareness of the media campaign exist among adolescents in sites that received more paid abstinence advertisements compared to adolescents in sites that relied on public service announcements and other community sources of abstinence information, such as billboards, posters, and radio ads? These

questions relate to the cost effectiveness of the different approaches utilized in the media campaign.

The Abstinence Only Education Media Campaign

In 1998 Cooley Advertising proposed a strategy to communicate the message of *sexual abstinence until marriage* through a variety of media, but primarily through television and radio ads. Three overarching goals guided their efforts over the past five years of abstinence-only programming:

- To present the public a message that encourages sexual abstinence until marriage.
- To present the public a message that supplements the educational programming of the statewide contractors.
- To create awareness of a toll-free number and a website that provides more information on abstinence for parents and students.

The media campaign was developed in tandem with the targeted educational program component and is to be considered part of the overall Abstinence Only Education Program. Arizona, like 17 other states of the 27 that have a media campaign as part of their abstinence-only education programs, has focused its media campaign primarily on youth. Although *abstinence* is key in all media campaigns, the phrasing of the message varied greatly across states. Some messages were less direct, e.g., *not me, not now* or *sex can wait.* Arizona was one of only four states with a key message of *abstinence only until marriage*. To be consistent with the ADHS guidelines, Cooley Advertising used *sexual abstinence until marriage* as a theme in all advertisements and promotional materials developed for the media campaign.

The media contractor set out to create a media campaign that would supplement the efforts of all program contractors and maximize coverage within the state. This was challenging given 1) the great diversity in geographic location, target audience, and program curriculum and 2) a fixed amount of funding. Table 6.1 presents the contracted amount for media services in each year of the media campaign.

Table 6.1 Cost of the media campaign

Contractor	Fiscal Year					Total
	1999	2000	2001	2002	2003	
Cooley Advertising	$795,000	$1,010,275	$1,364,629	$1,232,231	$1,214,025	$5,616,160

To meet the challenge of the media campaign, Cooley Advertising put forth the following strategy:

- To prioritize the primary audience as 1) children nine through 12 years old; 2) youth 13 through 19 years old; and 3) parents. Making children age nine through 12 years the first priority was based on the assumption that the long-term success of the Abstinence Only Program lies with youths' perceptions of sex and that a focus on young children can instill values and perceptions early. In the final years of the program the primary focus shifted toward youth 12 to 18 years old.
- To use the majority of the media budget to air the abstinence-only ads on cable television channels, such as MTV and Nick at Nite, and on network programs that are popular among youth 12 to 17 years old.
- To use public service announcements (PSAs), i.e., airtime donated by television and radio stations for abstinence-only advertisements around the state.
- To target the Spanish-speaking population via local Hispanic television and radio stations that air Spanish translations of selected ads. Developing and releasing spots targeted to American Indian and black youths in years 4 and 5 further addressed cultural diversity.
- Other print media supplemented the broadcast campaign, especially in the rural areas of the state. Examples of this approach included theater slides, advertisements on bus benches, and press releases to local media.
- Consistent with the current literature and with prior evaluation recommendations, the approach to developing the ads has been to show the negative consequences associated with sex before marriage, as well as to address adolescents' normative expectations about their peers. This provides a context for delivering the abstinence-only message.

The next three sections describe how each of the major mediums, television, radio, and non-broadcast forms, were used in the media campaign.

Television

Given that television is the most likely form of media to reach the target population, the media strategy centered on the development and release of television ads in Arizona's three designated market areas (DMAs): Phoenix, Tucson, and Yuma. The DMAs are geographic regions that include the metropolitan and surrounding areas the broadcast media serve. The Phoenix DMA is the largest in the state and covers all of central and northern Arizona. The Tucson DMA covers south central and southeastern Arizona. The Yuma DMA covers the southwestern portion of the state. Cooley Advertising negotiates for television airtime, both paid advertising and PSAs, in these three DMAs. Part of Cooley Advertising's marketing strategy was to air television ads on the channels most popular with teens. These include various cable channels, such as MTV, Disney, ESPN, Warner Brothers, Fox, and UPN. Ads were also aired on Spanish channels to reach Arizona's large Hispanic population.

Cooley Advertising developed the television advertisements based on findings from research conducted with teens and preteens and from reviews of pertinent information related to marketing to a teen audience. Research activities included focus groups, one-on-one interviews, and observations of groups of teens interacting socially. Information was also gathered from abstinence-only program educators through a monthly media campaign questionnaire about the reactions of students and the community to the abstinence advertisements.

Each year a new series of television ads was developed focusing on a different abstinence-related theme. In fiscal year 1999 the goal was to increase awareness of the high teenage pregnancy rate in Arizona. Three television ads were developed and placed on network and cable television channels in January 1999. Two ads, *Words* and *Backpack* , were each shown as a single 30-second spot; a third ad, *Wedding Cake*, was shown as a single 15-second spot.[64] The *Words* ad was aimed at parents, the *Backpack* ad was aimed at preteens, and the *Wedding Cake* ad was designed to reach teenagers. All of the ads identified a toll-free hotline to provide additional information. The first television ad campaign began January 14, 1999 and ran through June 1999.

After receiving feedback about the exclusive focus on teenage girls in the Year 1 ads, Cooley Advertising designed four new ads for fiscal year 2000 to target males and females (two versions of *Ritual/STD Book* , *Opinion/Being a Man*, and *Oh Baby/Squeaking Bed*). These ads featured teens discussing the influence of peers and the media on sexual behavior. In the third year, fiscal year 2001, the primary focus was on the potentially harmful consequences of sex, such as STDs and unwanted pregnancies. Eleven new ads were developed and released mostly in the fall of 2000. These ads were more contemporary and featured quick shots of teens being interviewed about sex and relationships. The campaign for fiscal year 2002 focused on both the harmful effects of sex and the importance of building a relationship prior to having sex. Four new television ads were developed and released in November 2001 including *He Loves Me/He Loves Me Not, She Loves Me/She Loves Me Not, Talk to your Kids,* and *Runner*, an ad targeted to black youths. Finally, in fiscal year 2002 four new television ads were developed and released in the fall, each maintaining a focus on the negative consequences of sex before marriage. These ads include *Still Hungry, Fairy Tale, Reputation,* and *Graduation* (the latter being released in the spring of 2003). Table 6.2 shows the total number of ads aired per DMA, and the use of paid ads versus PSAs over the past three years of the program.

Table 6.2 Television ads aired from January 2000 through June 2003

DMA	Paid Ads	PSAs	Total	
			Number	Percent
Phoenix	9,357	5,376	14,733	26%
Tucson	6,917	31,543	38,460	66%
Yuma	543	64	607	1%
Cable One (Flagstaff and Prescott)	2,667	1,568	4,235	7%
Total	19,484	38,551	58,035	100%

Radio

Radio ads began airing in mid March of 1999 with ads targeted at rural and Hispanic audiences. As with the television campaign, Cooley Advertising selected the most popular radio stations and some Spanish-speaking stations to air the advertisements. As with the television ads, the placement of radio ads as PSAs was part of the overall strategy. Two new radio stations, one in the Phoenix market and one in the Tucson market, began airing abstinence ads in 2000. In the fall of 2000 the majority of television ads were released as radio spots. From July 2000 to June 2001, over 10,000

radio spots were scheduled to run in the three DMAs. A new radio ad, *Not Worth the Risk*, was released in November 2001. Four versions of this same ad were developed that each presented boys and girls singing about the risks of sex and promoting the message that *sex is not worth the risk.* In Year 5, two of the most recently developed television ads, *Fairy Tale* and *Graduation*, were released as radio ads.

Non-broadcast Media

Cooley Advertising used several media in addition to broadcast media to promote the abstinence-only message. These included theater slides, bus benches, billboards, posters, brochures, key chains, collapsible flying discs, changing message pens, and message pencils. These supportive materials were considered a cost-effective method of promoting the abstinence message in the more rural areas of the state. The posters and brochures were developed for the campaign using contemporary mural and graffiti art designed to appeal to teens. The posters and brochures provide information about abstinence and refer the reader to additional sources of information such as the ADHS, the abstinence hotline, and the website.

Cooley Advertising developed and maintains a toll-free hotline, 1-888-844-WAIT, and the ADHS website, www.sexcanwait.com. The toll-free hotline and website were designed as ways to provide callers with additional information. Callers to the hotline can access one of three options, teens, parents, or Spanish language, and can leave their name and address to receive a brochure by mail. The toll-free hotline also makes reference to the abstinence website. Information available via the toll-free hotline and website include the consequences of sex, such as STDs, etc. The website also addresses normative information regarding abstinence, such as how many teens and teen celebrities practice abstinence. During 2001, the hotline received an average of 38 calls per month. A substantial increase in calls to the hotline was recorded in fiscal year 2002. By May 2002 the hotline was averaging 70 calls per month—an 84% increase. The increase in hotline calls is likely attributable to press releases about a new abstinence compact disc with interactive features. The abstinence-only website was designed to appeal to teens but also includes a menu specifically for parents. A menu option is also included for those who have a preference for Spanish. Other links included additional abstinence websites, videos of abstinence ads that can be played on computer, statistics about pregnancy and STDs, and the latest news regarding abstinence. The website was updated during 2002 to present a trendier image. During fiscal year 2002 the website received approximately 39,000 hits per month or about 1,200 per day.[65]

Media Campaign Awareness

The Abstinence Only Education Program Media Campaign Awareness Survey, originally designed and administered in 2001, was also administered in the springs of 2002 and 2003. This survey was created to measure awareness of the Abstinence Only Education Program media campaign among adolescents 12 to 18 years of age in the Phoenix metro area, Tucson, and Flagstaff. The survey examined recall of the television and radio ads on both an aided and unaided basis. It also collected impressions of the media campaign's message and relevant demographic as well as media usage information.

A demographically proportional sample of adolescents was selected each year and interviewed by telephone. The three samples consisted of 900 randomly selected youth 12 to 18 years old. The sampling method provided an equal probability of selection of respondents and a margin of error of about three percent. The use of random digit dialing, i.e., computer generated telephone numbers, ensured that area households not listed in the telephone directory could be selected. Each interview lasted approximately 13 minutes.

Consistent with the sampling plan, a majority of the interviews (56%) were completed in the Phoenix metro area, one-third (33%) were conducted in Tucson, and the remaining 11% were conducted in Flagstaff. The demographic profile of the respondents was highly consistent over the three years. Of the 2,708 youths interviewed, the majority (about 67%) identified themselves as white while about 18% reported that they were Hispanic (see Table 6.3). Some 67% of respondents reported high academic performance, defined as getting mostly A's or a combination of A's and B's in school. Almost half of the overall sample had participated in an Abstinence Only Education Program in school. This proportion increased from 42% in 2001 to 47% in 2003.

Table 6.3 Demographic profile of telephone survey respondents (2001–2003)*

Area	**Academic Performance**
Phoenix 56%	Almost all A's....28%
Tucson....33%	Mostly A's and B's 40%
Flagstaff 11%	Mostly B's and C's....25%
	Mostly C's or below 5%
Age	No answer....2%
12 to 14....41%	
15 to 16....33%	**Participation in Abstinence Only Program in School**
17 to 18....26%	
	Yes....44%
Gender	No 53%
Male 51%	Don't know....1%
Female 49%	
Ethnicity	
White/Caucasian....67%	
Hispanic 18%	
Black....3%	
Asian-American....3%	
American Indian 3%	
Other....6%	

* Describes the sample of telephone respondents over three years (*N* = 2,708).

In terms of media usage, the majority of those interviewed, 70%, reported watching television an average of two or fewer hours each day. Younger respondents, those 12 to 14 years old, and those with grades lower than A were reportedly heavier television viewers, watching an average of more than four hours per day. Except for a small percentage of respondents who did not have cable or satellite, the majority consistently reported MTV, Warner Brothers, Disney, Fox, Nickelodeon, HBO, and Comedy Central as their favorite and most watched channels.

Table 6.4 lists respondents' television viewing preferences. The two most-watched television programs were *Friends* for girls and *The Simpsons* for boys. Girls also tended to watch *7th Heaven*, while boys watch sports programs and cartoons. The survey findings were consistent with Cooley Advertising's targeting of these particular shows and channels.

Table 6.4 Respondents' television viewing preferences

Favorite Television Shows	2001 (*N* = 891)	2002 (*N* = 896)	2003 (*N* = 901)
Friends	18%	22%	21%
The Simpsons	19%	16%	19%
7th Heaven	5%	7%	6%
Cartoons	2%	5%	7%
MTV/Videos/TRL (Total Request Live)	6%	5%	5%
Fresh Prince	3%	4%	2%
News	4%	4%	5%
Sports	5%	4%	3%
Others	6%	6%	8%
Don't know	11%	9%	7%
None	13%	10%	8%

Radio listening habits and preferences were also addressed as a part of respondents' overall media usage. About seven of 10 individuals surveyed indicated that they listened to radio two or fewer hours each day, which is similar to reported television viewing habits. Girls appeared to be heavier radio listeners than boys. Radio listening patterns were surveyed by geographic area. From 2000 to 2003 radio station preferences were:

- Phoenix: KZZP-FM (most mentioned by girls); KEDJ-FM, The Edge; and KKFR-FM (most mentioned among Hispanics).
- Tucson: bilingual KOHT-FM, KRQQ-FM (most mentioned by girls), and alternative rock station KFMA-FM.
- Flagstaff: KQST-FM (most mentioned by girls); KFLX-FM, The Eagle; and KZGL-FM (favored by boys).

Unaided Recall

To measure unaided recall, interviewees were asked whether or not they recalled seeing or hearing an abstinence-only ad in which they were encouraged to wait until marriage to have sex. Table 6.5 summarizes unaided recall among youth interviewed through the telephone survey. Unaided recall of abstinence-only advertisements

increased steadily over the five years of programming. Exposure among the target population has been exceptional given unaided recall rates above 80% in each year. Unaided recall has consistently been highest among the following groups:

- Females.
- Older respondents.
- Respondents with high academic performance (i.e., mostly A's).
- Respondents who listened to more than three hours of radio or watched one to four hours of television per day.

Table 6.5 Unaided recall of ads that promote abstinence

Respondent Characteristics	Percent Unaided Recall		
	2001 (*N* = 900)	2002 (*N* = 900)	2003 (*N* = 908)
OVERALL RECALL	**81%**	**85%**	**82%**
Geographic Location			
Phoenix Metro	86%	88%	82%
Tucson	72%	80%	78%
Flagstaff	79%	90%	90%
Gender			
Males	78%	82%	74%
Females	84%	89%	89%
Age Group			
12–14	75%	80%	71%
15–16	84%	88%	87%
17–18	86%	91%	91%
Ethnicity			
White	82%	85%	83%
Hispanic	80%	85%	78%
Other	77%	88%	81%
Past Participation in Abstinence Only Education Programs			
Yes	80%	82%	79%
No	81%	88%	84%

As shown in Table 6.6, youth appear to increasingly recall more television ads over other types of media such as radio ads or posters. This finding is consistent with Cooley Advertising's strategy to increasingly devote more resources to the creation of new television spots to maximize exposure.

Table 6.6 Unaided recall associated with abstinence ads

Where have you seen or heard these ads?	2001 Phone Survey (*N* = 726)	2002 Phone Survey (*N* = 767)	2003 Phone Survey (*N* = 743)
Television	95%	94%	95%
Radio	21%	18%	17%
Billboard	6%	6%	5%
Magazine	4%	4%	5%
Poster	2%	2%	2%

A majority of respondents, about 88%, who recalled an abstinence-only ad reported that they remembered a specific message associated with the ad. Some respondents recalled the *Sex Can Wait* tag line or the website, www.sexcanwait.com, and also mentioned STDs. The message most often recalled by youth, however, was *abstinence only until marriage* as reflected in the following responses:

- Wait until you are married.
- You should not have sex before you are married.
- Save sex until marriage.
- It is better to wait.

Aided Recall of Specific Television Ads

To determine what television ads respondents were most likely to recall, respondents were read brief descriptions of 10 ads and were asked to indicate for each if they had ever heard or seen the ad (see Table 6.7). Each year, new ad descriptions were added to the survey to replace the oldest ads. Five ads have consistently received a 50% or greater aided recall rate: *Words*, *Backpack*, *Wedding Cake/Pregnant Bride*, *STD Book in Girlfriend's Bedroom*, and *Oh Baby/Squeaking Bed*.[66]

Table 6.7 Aided recall of abstinence television ads

Television Ads	1999 Program Participants (*N* = 2,600)	2001 Phone Survey (*N* = 900)	2002 Phone Survey (*N* = 900)	2003 Phone Survey (*N* = 908)
Words	51%	57%	N/A	N/A
Backpack	58%	63%	N/A	N/A
Wedding Cake/ Pregnant Bride	63%	58%	55%	N/A
STD Book/Ritual	N/A	50%	51%	N/A
Oh Baby	N/A	50%	50%	N/A
He Loves Me/She Loves Me	N/A	N/A	48%	57%
Put a Lock on It	N/A	21%	40%	32%
Pregnancy Test	N/A	N/A	38%	45%
Media Shots	N/A	40%	37%	35%
Promise Yourself (Native American)	N/A	23%	31%	23%
Running Track/Future	N/A	N/A	20%	28%
Opinion/Being a Man	N/A	23%	19%	N/A
Fairy Tale	N/A	N/A	N/A	40%
Still Hungry	N/A	N/A	N/A	16%
Reputation	N/A	N/A	N/A	39%

Perceived Effectiveness of the Ads

The majority of survey respondents agreed that the abstinence ads could potentially influence teens to embrace the *abstinence only until marriage* message (see Table 6.8). The majority who recalled abstinence television ads on an unaided basis thought such ads would positively influence teenagers' attitudes. This was particularly true among girls and younger respondents between ages 12 to 14 years. Among these respondents, about nine out of 10 thought that teenagers would be more likely to agree with the idea of sexual abstinence after seeing the ads, including two of 10 who thought teens would agree a lot more. About half of the respondents reported that they felt teens would be more likely to wait to have sex after seeing the ads, while 30% to 40% reported they would feel about the same. Finally, similar results were found with regard to respondents' perceptions of the impact of the radio ads, although, compared to the responses regarding televisions ads, a smaller percentage of respondents, 50% to 60%, reported that they considered the radio ads to have a positive influence on teens. The Year 5 survey of *program participants* found that 81% of preteens and teens who saw an abstinence ad felt more like waiting to have sex after seeing the ad.

Table 6.8 Perceived influence of television ads on abstinence

Do you think teens would agree with the idea of sexual abstinence after seeing the television ad(s)?	2001 Phone Survey (*N* = 606)	2002 Phone Survey (*N* = 563)	2003 Phone Survey (*N* = 551)
A lot more	18%	20%	24%
Somewhat more	70%	67%	64%
Somewhat less	4%	8%	6%
A lot less	2%	1%	3%
Don't know/not sure	6%	4%	3%

Note: Respondents are a subset of telephone survey respondents who recalled seeing an abstinence ad(s) on television on an unaided basis and felt the ads have an influence on teenagers' attitudes about abstinence.

Respondents' Response to the Abstinence Ads

Respondents' desire to talk about the ads was surveyed to determine if the ads were triggering thoughts and questions about the abstinence-only message. The percentage of respondents who reported going to the website (www.sexcanwait.com) or calling the hotline (1-888-844-WAIT) after seeing the ads remained low, ranging from about 2% in Year 1 to about 5% in the fifth year of the media campaign. No data were available to assess whether or not the number of toll-free hotline calls and website hits were related to the intensity of the ad campaign.

Communication responses to the ads also shed some light on the persons the respondents were most likely to talk with about abstinence. This can have implications in terms of future targeting of the media campaign. When it comes to discussing abstinence ads, parents and friends were respondents' audiences of choice (see Table 6.9). For respondents who recalled the television or radio ads, about one in five (17% to 20%) reported that they spoke to someone about the ad's message. Girls, non-whites, and those individuals who participated in the Abstinence Only Program in school were more apt to have talked to someone about the television ads. What stands out in Table 6.9 is the proportionate shift over time in terms of whom the respondent chose to talk with about abstinence. Parents decreased as an audience of choice from 50% to 30%, while friends increased from 38% to 51%. The potential importance of adolescents discussing the ads with their parents is reflected in a recent study of literacy competence in the United States.[67] This study found that students who discussed their schoolwork with their parents had significantly higher literacy abilities. The more frequent the discussion of schoolwork, the higher literacy competency and this relationship continued through the senior year of high school. Extrapolating to abstinence, these findings suggest

that the discussion of abstinence between parents and their children may be very important in terms of understanding and retaining the abstinence message.

Table 6.9 Communication response to the ads

With whom did you talk about the television ad's message?	2001 Phone Survey (*N* = 142)	2002 Phone Survey (*N* = 142)	2003 Phone Survey (*N* = 171)
Parents	50%	39%	30%
Friends	38%	46%	51%
Boyfriend/Girlfriend	9%	6%	10%
Siblings	16%	6%	10%
Teacher	6%	8%	6%
Note: Includes only those who reported speaking to someone about an abstinence ad's message.			

Additional Public Relations Support

In addition to the media campaign, Cooley Advertising developed a public relations strategy to provide general public relations support for the program and to provide individualized services for statewide contractors. In addition to the development and maintenance of the website and the toll-free hotline, Cooley Advertising assisted with press releases, sponsored a statewide creative contest, and supplied schools with abstinence-only display kits and other related information. The public relations efforts and the contractors' satisfaction with these efforts are described below.

Press Releases

Cooley Advertising issued dozens of abstinence-related press releases throughout the state, representing free publicity for the Abstinence Only program contractors. Cooley Advertising estimated that the annual value of the press releases was approximately $500,000.

Statewide Creative Contest

Cooley Advertising sponsored an annual statewide creative contest in year 3, year 4 and year 5 in which students submit artistic and creative writing entries that express the value of sexual abstinence. The contest was conducted each spring and the abstinence educators served as judges. Each year, hundreds of art and writing entries were received from elementary and junior and senior high school students and from a few adults. ADHS staff conducted preliminary judging of the entries. Representatives of a Phoenix-based television station and a Cooley Advertising staff member selected the semi-finalists and finalists. All students who submitted entries

received certificates of participation and the winners received gift certificates for Wal-Mart or Target in the amounts of $250 and $500. Winning entries were published on a calendar.

Satisfaction with the Media Contractor

To assess Cooley Advertising's progress in meeting the needs of the program contractors a comprehensive questionnaire was administered in the spring of 1999. The survey included satisfaction questions on the television ads and on the type of public relations assistance contractors received to support and promote their programs. One questionnaire was given to each contractor for a total of 17 site coordinators or educators. In the spring of 2001, a series of questions about the current media campaign was included in the *Abstinence Only Program Staff Questionnaire* that was mailed to all program educators. A total of 60 educator questionnaires were collected in this process. The highlights of program site coordinators' and educators' perspectives are summarized below:

- Over the five years of the program a majority of program educators requested public relations assistance from Cooley Advertising. Assistance was requested mostly for the development of promotional materials and brochures and for press releases.
- Program educators' satisfaction with Cooley Advertising's public relations assistance was very high. More than 80% of educators or site coordinator respondents agreed that press releases provided sufficient information about the program and that the public relations assistance met their needs and was provided promptly.
- Overall, a majority of program contractors liked and used a diversity of ads developed by Cooley Advertising and reported feeling that they had sufficient input into the development of the ads. The majority of educators surveyed (more than 80%) described their students' overall reaction to the ads as *positive* or *very positive*.

Appendix A

State and Federal Program Goals and Requirements

Program Goals and Requirements

Arizona's Program Goals and Performance Targets

The five overarching state goals that form the basis for the program's conceptualization and components are:

- To promote abstinence as a healthy choice and positive lifestyle through statewide development and implementation of programs designed to change a culture that sends conflicting messages about out-of-wedlock sexual activity.
- To develop and implement programs specifically for school-age children, males and females, grades 4 through 12.
- To develop and implement programs for parents and interested adults on adolescent growth and development, the benefits of abstinence, and improving parent/child communication.
- To reduce the incidence of out-of-wedlock pregnancies and births through development of a program specifically targeting adults.
- To involve the community in the development and implementation of programs and activities that are accessible and promote and support abstinence decisions.

The State of Arizona's performance measures include:

- Decrease unwed birth rates for teens and young adults ages 15 to 24 years.
- Reduce the proportion of adolescents 17 years of age and younger who have engaged in sexual intercourse.
- Reduce the pregnancy rates for teens ages 15 to 17 years by 0.5% each year.
- Reduce the STD rates for teens ages 15 to 19 years by 1% each year.
- Obtain a rate of birth for pre-teens ages 9 to 12 years of less than 1% by county and within communities and decrease the amount of early and frequent dating among this population.
- Realize fifty percent (50%) of the youth served being able to identify the abstinence media message.

- Increase the number of people involved in the community-level abstinence programs and the number of collaborative partnerships developed.

Federal Requirements and Performance Measures

Federal guidelines for programs funded through Title V, Section 510(b) require the following and also require the grantee to identify at least one program component meeting one of the guidelines A through H to be the focus of their program:

(A) has as its exclusive purpose teaching the social psychological and health gains to be realized by abstaining from sexual activity.

(B) teaches abstinence from sexual activity outside of marriage as the expected standard for all school age children.

(C) teaches that abstinence from sexual activity is the only certain way to avoid sexually transmitted diseases and other associated health problems.

(D) teaches that a mutually faithful monogamous relationship in the context of marriage is the expected standard of human sexual activity.

(E) teaches that sexual activity outside of the context of marriage is likely to have harmful psychological and physical effects.

(F) teaches that bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society.

(G) teaches young people how to reject sexual advances and demonstrates how alcohol and drug use increases vulnerability to sexual advances.

(H) teaches the importance of attaining self-sufficiency before engaging in sexual activity.

The following were set forth as performance measures for the federal program:

- Reduce the number of out-of-wedlock pregnancies and births to teens ages 15 to 17 years.
- Reduce the proportion of adolescents who have engaged in sexual intercourse.
- Reduce the incidence of sexually transmitted diseases in youth ages 15 to 19 years.

Appendix B

Contractors, Award Dates, and Contract Amounts 1999–2003

Table B1 Contractor, contractor award date, county, and amount by fiscal year

Contractor	Date of Initial Award	County	Amount by Fiscal Year					
			1999	2000	2001	2002	2003	Total
ASU Community Health Services	5/98	Maricopa	$68,961	$57,850	$62,788	$67,455	$52,984	$310,038
Mountain Park Health Center	5/98	Maricopa	$207,438	$196,005	$220,992	$189,657	$192,762	$1,006,854
St. Joseph's Hospital	5/98	Maricopa	$201,108	$166,128	$203,281	$127,844	$136,582	$834,943
Passion & Principles of AZ, Inc.	5/98	Maricopa	$97,237	$87,255	$100,440	$120,120	$134,923	$539,975
Catholic Social Service (Maricopa County)	5/98	Maricopa	$119,620	$149,256	$138,365	$272,630	$252,050	$931,921
Pima Youth Partnership	5/98	Pima	$139,502	$146,142	$100,058	$100,506	$99,174	$585,382
Pima Prevention Partnership	5/98	Pima	$173,852	$244,512	$288,564	$289,315	$311,840	$1,308,083
Child & Family Resources (Tucson)	5/98	Pima	$89,657	$116,083	$117,738	$123,684	$123,791	$570,953
Gila County Cooperative Extension	5/98	Gila	$76,166	$65,400	$66,420	$75,120	N/A	$283,106
Pinal County Division of Public Health	5/98	Pinal	$133,762	$119,189	$117,397	$117,229	$127,222	$614,799
Arizona Psychology Services	5/98	Navajo	$103,362	$158,004	$158,232	$168,273	$205,573	$793,444
BHF Puentes de Amistad	5/98	Yuma	$82,827	$100,169	$134,604	$134,679	$135,344	$587,623
Catholic Social Service (Yavapai County)	5/98	Yavapai	$100,456	$76,198	$82,316	$84,819	$109,743	$453,532
Northern AZ University	3/99	Coconino	$52,098	$43,122	$46,484	$45,472	$35,993	$223,169
Child & Family Resources (Sierra Vista)	3/99	Cochise, Santa Cruz	$265,219	$227,319	$233,680	$245,375	$241,628	$1,213,221
West Care AZ	3/99	Mohave	$101,750	$93,000	$177,679	$176,193	$176,062	$724,684
Tuba City Regional Healthcare Corporation	3/00	Coconino	N/A	$99,500	$97,998	$83,338	$83,400	$364,236
Total			$2,013,015	$2,145,132	$2,347,036	$2,421,709	$2,361,950	**$11,345,963**

Note: All monetary amounts are rounded to the nearest dollar. Each of the 17 contractors was required to provide a monetary match of 5% of the state contracted amount in years 2 through 5. The purpose of this monetary match is to permit ADHS to expand pr ograms, fund additional sites, and build a community base of support. The 1998 contracts awarded in March 1999 were 13½-month contracts.

Appendix C

Summary of the Literature On Risk and Resilience for Adolescent Sexual Behavior

Summary of the Literature

This literature summary examines factors associated with risk and resilience for adolescent sexual behavior. In order to design effective programs to change behavior, it is important to understand the range of factors that influence the targeted behavior. Adolescent sexual activity is viewed in two ways in the research literature. The most common approach is coital status, measured by self-reports of sexual intercourse. The second approach views sexual activity as a continuum of progressively advanced behaviors from holding hands, to kissing, sexual touching, and finally intercourse (Halpern et al., 2000).

Protective Factors

The National Longitudinal Study on Adolescent Health identified factors within three domains, family, school and the individual, associated with a delayed onset of sexual activity (Resnick et al., 1997).

Family factors include:

- High levels of parent connectedness.
- Parent disapproval of their adolescent being sexually active.
- Parent disapproval of their adolescent using contraception (Miller, 2002).
- Parenting style.
- Parental monitoring.

The relationship between family factors and children's risk behaviors (i.e., smoking, drug and alcohol use, delinquent behavior, and sex) is well established. For instance, teens who *failed* to stop using tobacco after being ticketed were more likely to report significantly lower levels of family pride, perceived parental concern about their tobacco use, and were more likely to have a parent who knew about their tobacco use prior to being ticketed than teens who stopped using tobacco (Langer et al., 2003). Similar results exist with regard to teen sexual behavior. Slicker (1998) found that male and female children of indulgent and neglectful parents, both lacking in demands and expectations, reported significantly riskier sexual behavior than did children reared by authoritative parents. Authoritative parents are characterized by

the use of consistent, firm discipline and are perceived by their children as warm and supportive. Consistent with these findings, Barnes and Farrell (1992) reported that early participation in sexual relations was negatively associated with the amount of parental monitoring of the adolescent's behavior. Longmore et al., (2001) found that parental monitoring prior to the onset of adolescence was important as a basic foundation for young people who later must make behavioral choices outside of parental purview.

School factors include:

- Higher levels of connectedness to school.
- Attending a parochial school.
- High overall school attendance.

Individual factors include:

- Intelligence.
- Pledging to remain a virgin.
- Ascribing a high level of importance to religion and prayer.

Halpern et al., (2000) found that higher intelligence operates as a protective factor against early sexual activity during adolescence. The relationship between sex and intelligence was curvilinear, such that adolescents at both ends of the intelligence spectrum were less likely to have sex. Higher intelligence was also associated with postponement of the full range of sexual behavior, from holding hands and kissing to intercourse. This same study also found weekly religious attendance a protective factor for coital status.

Risk Factors

In addition to the factors that make teens resilient to early sexual behavior, factors that increase risk for sexual activity have been identified. Risk factors fall within four domains: biological, psychological, cognitive and behavior. A fifth domain, opportunity, has been added.

Biological factors include:

- Increased age.
- Earlier puberty.
- Being male (AAP, 1999; Christopher & Roosa, 1991; Alan Guttmacher Institute, 1994; Graber, Peterson, & Brooks-Gunn, 1996; Maynard, 1997).

Age is the most important factor in determining whether or not a teen is sexually experienced. Fifty-six percent of females and 73% of males report sexual intercourse before their 18th birthday (AAP, 1999). The older the adolescent, the more likely he or she is to be sexually experienced. Earlier puberty is also associated with earlier age of sexual experience, particularly among young men (Christopher & Roosa, 1991).

Psychological factors include:

- Permissiveness or a less coherent set of beliefs about sexuality.
- A lack of confidence in sexual refusal skills (Santelli et al., 1999; Christopher & Roosa, 1991; Rosenthal, Moore & Flynn, 1991).

Cognitive factors include:

- Failure to understand biological processes that lead to pregnancy.
- Poor decision-making skills.
- Distorted perceptions of risk (Millstein & Halpern-Felsher, 2002; Quadrel, Fischhoff, & Davis,1993).
- Lower grade point average (Moore et al., 1998).
- Lower educational expectations (Brooks-Gun & Paikoff, 1993; Santelli et al., 1999).

Factors such as understanding biological processes leading to pregnancy, decision-making skills, and perceptions of risk all contribute to the probability an adolescent will engage in sexual activity (Brooks-Gunn & Paikoff, 1993). A recent study of sex-related knowledge among mentally disabled adolescents revealed that these adolescents have little exposure to sex education in school, their parents tend not to

discuss sex with them, and their knowledge regarding sex is largely incorrect. Nonetheless, a significant proportion of them, especially males, are sexually active (Cheng & Udry, 2003). Sexually active adolescents report a lower grade point average, and lower educational expectations than do their sexually inexperienced counterparts (Santelli et al., 1999).

Behavioral factors include:

- Adolescent involvement in problem behavior including alcohol and drug use.
- Antisocial and delinquent behavior.
- Childhood conduct problems for females (Santelli et al., 1999; Christopher & Roosa, 1991).

Environmental factors include (Miller, 2002):

- Single parent.
- Absence of father.
- Parental divorce or separation during early adolescence.
- Low educational attainment of parents.
- Low family socio-economic status.
- Less parental support.
- Lack of parental supervision.
- Poor parent/child communication/relationship (Karofsky, Zeng, & Kosorok, 2001).
- Parental permissiveness.
- Sexually active peers/siblings.
- Pregnant or parenting teenage sisters.
- Victim of sexual abuse.
- Residing in disorganized or dangerous neighborhoods.

- Deviant peer group (Maynard, 1997; Santelli, DiClemente, Miller & Kirby, 1999).

Studies have shown that young people who live in single-parent households engage in sexual activity at an earlier age, and more frequently, than those from two-parent households (Whitbeck, Simons, & Goldberg, 1996). This relationship is found to be stronger for girls than for boys, and is persistent when other important predictors such as religiosity, age, race, and social class are controlled. In addition, Inazu and Fox (1980) found that daughters of single mothers who have cohabited are more likely to be sexually active. Divorce is believed to increase the odds of early sex through the following mechanism: divorced mothers are more likely to possess permissive sexual attitudes than those who are married and divorced mothers and fathers are less apt than married parents to engage in parenting behaviors that discourage affiliation with deviant peers. Parental control is also diminished by the loss of a supervising adult that occurs with divorce, increasing the prospect that a child will become involved in a deviant peer group. Affiliation with deviant peers strongly predicts early intercourse for both boys and girls. As single mothers date and establish new intimate relationships, their sexual attitudes and behaviors may become more apparent to their daughters who may then adopt such adult behaviors in their own early romantic relationships. A similar finding is present for divorced fathers. As with divorced mothers, divorced fathers are likely to hold relatively liberal attitudes regarding sex outside of marriage, and they model these attitudes to the extent that they participate in dating relationships that appear to include sex. Divorced fathers are less involved in parenting than fathers in intact families, increasing the probability that an adolescent will affiliate with deviant peers and engage in deviant behavior. Adolescents are less likely to become involved in deviant peer groups if their fathers exert discipline and control. By reducing the probability of association with deviant peers, a father indirectly lowers his children's chances of early sexual intercourse. Past studies have shown that lax supervision and inconsistent discipline are associated with negative developmental outcomes and early transition to adult behaviors (Patterson, 1982; Patterson, DeBaryshe, & Ramsey, 1989).

Opportunity includes:

- Dating frequency.
- Early onset of dating.

Several studies have supported the relationship between dating and sexual activity. For instance, Thornton (1990) examined adolescent sexuality within the context of a life course developmental model and found that young people who began dating at an early age tended to develop steady relationships relatively early and continued to date more frequently. Both the timing of the initiation of dating and the development of steady dating relationships had substantial implications for the development of sexual relationships. Other studies suggest the dating/intercourse relationship is different for girls and boys. Miller et al., (1997) found that age of first date and dating frequency were two of the most significant predictors of age at first intercourse for males. In contrast, age of first date was a significant predictor of age at first intercourse for girls, but dating frequency was not. Meschke et al., (2000) also examined factors related to the timing of first intercourse. They found two factors, always-married parents and less dating alone, related to a delay in first intercourse for girls. The onset of sexual intercourse among boys, in contrast was influenced by association with peers with lower achievement orientation and ascribing greater importance to popularity. A study by Woody et al., (2000) found that among virgins, total abstainers came from lower socioeconomic status and had fewer dating opportunities and lacked a viable dating relationship. Two subgroups of virgins, those who came close to intercourse and those who did not, differed only on social/dating opportunities. Miller et al., (1986) found that religious group affiliation was not always a protective factor. For instance, the relationship between early dating and intercourse was particularly strong among Mormons, a religious group that has institutionalized age 16 as the legitimate age to begin dating. In a sample of 790 students age 14 to 19 they found that early dating, especially steady dating, was related to permissive attitudes and to premarital sexual experience.

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Appendix D

A Description of Television and Radio Ads Developed for the Abstinence Only Education Program Media Campaign

Schedule of Television Advertisements

Table D1 Schedule of television advertisements (1999–2003)

Title	Target	English	Spanish	Release Date
Words	All	X		January 1999
Backpack	Teens/Girls	X		January 1999
Wedding Cake	Teens/Girls	X		January 1999
Ritual/STD Book (Baseball or Music)	Teens/ Boys	X		November 1999
Opinion/Being A Man	Teens/ Boys	X	X	November 1999
Oh Baby	Teens	X		November 1999
Media and Sex	Teens	X		Fall 2000
Focus on Relationships	Teens	X		Fall 2000
Peer Pressure	Teens	X		Fall 2000
Put a Lock on It	Teens	X	X	Fall 2000
Promise Yourself	Teens	X	X	Fall 2000
Promise Yourself (Native American)	Teens/ Native Americans	X		Fall 2000
Kids Have Their Own Ideas about Sex	Parents/Teens	X		Fall 2000
Son Talk and Daughter Talk	Parents/Teens	X	X	Fall 2000
Pregnancy Test	Teens	X		Spring 2001
Not Worth the Risk	Teen	X		November 2001
Track Runner	Teens/ African Americans	X		January 2002
He Loves Me	Teens/Girls	X	X	January 2002
She Loves Me	Teens/Boys	X		January 2002
Talk to Your Kids	Parents		X	March 2002
Still Hungry	Teens	X	X	November 2002
Fairy Tale	Teens/Girls	X	X	November 2002
Reputation	Teens/Girls	X	X	November 2002
Graduation	Teens	X		March 2003

Description of Abstinence Television Ads (1999–2003)

Year 1 Ads

Words: A title card appears with the word "abstinence" and then adds the word "sex" and then adds the toll-free number "1-888-844-WAIT". Background music is a preschool song with lyrics spelling out the word "abstinence." A voice-over states, "Sometimes you have to teach the big words…before the little ones. Unless you talk to your kids about abstinence, no one else will."

Backpack: Camera shot pans across the backs of various young people wearing backpacks. Background chatter of children is heard. Panning continues to the last girl, who is wearing a baby-pack. Baby is crying. Title card fades in "Learn more about life before creating one. Abstinence before marriage 1-888-844-WAIT."

Wedding Cake: Camera shots of a fancy wedding cake moving up to the top of the cake that has one bride figurine. The bride is clearly pregnant and there is a set of footprints as though the groom figurine has left the cake. Background music with Wedding March. Title card fades in "Before saying Yes, say I Do. Abstinence before marriage. 1-888-844-WAIT."

Year 2 Ads

Ritual (Baseball): Camera shots of a young male in a bedroom who is looking at a girl in the adjoining bathroom. She is visible through frosted glass. They both appear to be preparing to have intercourse. There is a camera shot as he removes his outer shirt and clears pillows off the bed. A sports commentary plays in the background noting, "This rookie is getting ready to make the play of his life." "John, I think tonight will be the night for a hit." The young male goes to look in the mirror and "primps" himself. As he looks down he notices a book on the dresser—*Living with an STD*. The commentary continues: "that's got to hurt, I don't think that was part of the game plan." "This could really destroy the rest of his career." Title card fades in 1-888-844-WAIT sexcanwait.com.

STD Book/Ritual (Music): This is the same ad as the one described above but it uses music in the background rather than the sports commentary. After the camera shot of *Living with STD* he glances back as she enters the room with a frightened look and the title card reads: "only one way to be sure" and fades to "abstinence before marriage."

Opinion/Being a Man: Camera shots are quick "head" shots of adolescent girls taking turns speaking directly into the camera. The dialog is: "To all you guys out there who see me as just another sex story to brag about to your friends. Reality check. You know that thing between your legs; that is not what makes you a real man. Not now, not ever. But don't worry there's a solution for guys like you its called a blow up doll. Personally, I'd rather keep my self respect than to sleep with you. And I'm not just speaking for myself."

Oh Baby. The ad begins with the sound of squeaking bedsprings with no picture, only a red background. The following sequence of words fade on to the screen:

> "Oh baby; Yeah, baby; Don't stop. Yes! Yes! Yes! Oh yes! Oh yeah!
> Oh Yeah, baby! Oh baby, don't stop! Oh, oh baby!"
> The sound of a crying baby is heard and the last title cards read:
> "Baby."
> "Abstinence before marriage."

Year 3 Ads

Media and Sex: This commercial involves interviews with teens discussing the use of sex in the media to sell products and services. The intent of the ad is to raise awareness among youth of media manipulation and to use this awareness to make wise decisions.

Focus on Relationships: This spot deals with the consequences that teens face when thy have sex before marriage. The message of the ad is that when teens choose abstinence they avoid negative consequences and are able to fulfill their goals.

Peer Pressure: In this ad, the teens discuss their feelings about and methods of dealing with peer pressure related to sex. The message relayed is that if you love your mate, you will practice abstinence until marriage.

Put a Lock on It: These four ads employ a shock factor to alert teens to some of the negative consequences of premarital sex. The scenario includes a teenage boy and girl dancing to sensuous music while the girl or boy (depending on which ad) begins to unzip his or her pants. A statistic such as "nearly 4 out of 10 girls in the U.S. become pregnant by the age of 20" is flashed on the screen followed by the zipper

closing and a padlock snapping into place to "Put a Lock on It". All four ads were also translated in Spanish. These ads are shown only on MTV after 9:00 P.M.

Promise Yourself: These three ads encourage teens to promise themselves to postpone sex so that they can fulfill their dreams and potential as adults. Two of the ads are similar to the "quick head shot" ads discussed above, in that teens appear on screen discussing the benefits of waiting, but they are not shot in the fast-paced style currently popular on television. One of these ads was also translated into Spanish. The third ad is meant to target the Native American population and portrays a teenage Native American girl walking through a field with a southwest landscape in the background. The girl is encouraging teens to wait because they are "worth waiting for."

Kids Have Their Own Ideas About Sex: This ad emphasizes that fact that children will develop their own ideas about sex based on what they hear and see inside and outside of the home. The importance of parents offering guidance and nurturing about sex to their children is emphasized.

Son Talk and *Daughter Talk:* The point of this ad is to encourage parents to talk about sex with their kids before someone else does. The ad poses a series of situations where a child might learn about sex "the hard way." This ad was also translated into Spanish.

Pregnancy Test: In this ad, teens are encouraged to fail the test to determine pregnancy. The premise of this ad is that teens strive hard to pass numerous tests, but should try equally hard to fail the pregnancy test. Teens are shown leaving a classroom discussing whether or not they passed a test they had recently taken in school. The ad then discusses how teens do not want to pass the "pregnancy test."

Year 4 Ads

Track Runner: In this ad, an African American teenage boy is running on a track and discussing how his life has been affected by contracting HIV.

He Loves Me/She Loves Me: This ad portrays a teenage boy or girl plucking petals from a flower discussing the pros and cons of having sex with their boyfriend or girlfriend. The "He Loves Me" version was also developed in Spanish.

Not Worth The Risk (Music Video): Eight versions of this same ad were developed (four in English and four in Spanish) to depict teenage boys and girls singing about the risks of sex and promoting the message that it is not "worth the risk." Each video is shot in a slightly different manner (e.g., different teens singing solos, etc.), but the words are the same in each version.

Talk to Your Kids: The focus of this ad is to encourage parents to talk with their kids about sex. The spot features a woman in her late thirties caring for a baby that viewers assume is hers. Through her dialogue, however, you understand that she is talking about her teenage daughter. Her daughter was too young when she became pregnant and could not care for the child. Now the grandmother is raising the baby. At the end of the spot, the woman mentions that she wished she had talked to her daughter sooner about sex and the consequences.

Year 5 Ads

Still Hungry (MTV): The strategy behind this spot was to create a consequence-based message that reflects the risks that teens take when engaging in sex before marriage. The consequences focused on in this ad are the sexually transmitted diseases that teens can contract. While actual pictures of the effects of STDs cannot be shown, the effects are alluded to through the use of food. A rotting banana, for example represents genital warts, a blistering hot dog represents Herpes, and a dripping Popsicle symbolizes Chlamydia. Along with the unappetizing pictures, statistics are displayed along the bottom of the screen showing how many teens are infected with each disease per year. The end of the ad focuses on one lone question, "Still hungry for sex?"

Fairy Tale: The strategy behind this ad is to reach teen girls through the emotional and economic burden that they may experience from sex before marriage. The premise is that life is not always like a fairy tale and consequences can arise from their actions. *Fairy Tale* takes place in a very threadbare setting with a bed and kitchen in the same room. A mother, who is a teenager, is sitting on the bed reading to her daughter. The ad focuses on the traditional fairy tale when Prince Charming rescues the beautiful princess, and they live together happily ever after. When the young child asks her mother where is mom's Prince Charming, there is silence from her as she thinks about the boy she thought was her "Prince Charming." A feeling of sadness sweeps over the mother's face wishing she were like the princess who waited for her prince.

Reputation: The strategy behind this ad is to show both male and female teens the importance of their reputation and the emotional effects of losing this reputation. The spot focuses on a young girl sitting in the quiet, deserted hallway of her school. She is alone and portrays a sense of sadness and remorse as she tells the story of how a "friend" talked her into sleeping with him. Once she did, she never heard from him again. Then one day, she received a call from one of his friends asking her to go out and have some "fun" with him. As the spot closes, she becomes cynical, as if to say she now knows the negative reputation with which her peers have branded her.

Graduation: This ad focuses on the lost opportunities that teens may experience when they engage in early sexual activity. They may lose out on college, high school experiences, and possibly graduation. The ad opens on an empty chair among many filled with graduates. The principal is giving his final speech to the students emphasizing that 80% of the class will be moving on to college. The ad then shows a young girl standing at the back of the auditorium with her baby. A feeling of loneliness and jealousy can be seen in her face as she watches the ceremony take place without her being part of it. The statistic "60% of pregnant teens will drop out of high school" fades in at the bottom of the screen. The girl turns to walk away in sadness as the message "give your future a chance" fades onto the screen.

Endnotes

[1] The evaluation of the media campaign in Year 3 and Year 4 of the program was presented in separate reports from the evaluation of the targeted programming: LeCroy & Milligan Associates, Inc. (2002). *Abstinence Only Education Program media and public relations campaign evaluation report June 2002*. Phoenix, AZ: ADHS, Office of Women's and Children's Health; LeCroy & Milligan Associates, Inc. (2001). *Abstinence Only Education Program public relations campaign evaluation June 2001*. Phoenix, AZ: ADHS, Office of Women's and Children's Health.

[2] In year five the targeted program was offered in a total of 168 schools, 9 after-school settings, 10 community, three probation, and 43 detention and residential settings.

[3] Donahue, M. J. (1987, September). *Promoting abstinence: Is it viable?* Paper presented at an Office of Adolescence Pregnancy Programs technical workshop. Washington, DC.

[4] Araki, Y., Braunschweig, S., Conant, A., & Dabel, R. (2003). Delinquency prevention: The U.S. and Great Britain. *LaFollette Policy Report*, *13(2)*, 9–19.

[5] Mattessich, P. W., Murray-Close, M., & Monsey, B. R. (2001). The twenty success factors. *Collaboration: What makes it work* (2nd edition). Saint Paul, MN: Amherst H. Wilder Foundation.

[6] Title V, Section 510(b) of the Social Security Act.

[7] Center for Disease Control (1997). State-specific birth rates for teenagers-United States, 1990–1996. *Morbidity and Mortality Weekly Report*, *46(36)*, 837–842.

[8] Boonstra, H. (2002). Teen pregnancy: Trends and lessons learned. *The Guttmacher Report*, *5(1)*.

[9] Maynard, R. A. (1997). The costs of adolescent childbearing. In R. A. Maynard (Ed.), *Kids Having Kids: Economic Costs and Social Consequences of Teen Pregnancy* (pp. 285-338), Washington, DC: The Urban Institute Press.

[10] Ventura, S.J., & Bachrach, C.A. (2000). Nonmarital childbearing in the United States, 1940–99. *National Vital Statistics Reports*, *48(16)*.

[11] Christopher, F. S., & Roosa, M. W. (1990). An evaluation of an adolescent pregnancy prevention program: Is "just say no" enough? *Family Relations*, *39*, 68–72.

[12] National trends in nonmarital births from 1988 through 1993 are affected by substantial under-reporting of births in two large states, Michigan and Texas, suggesting an earlier and more gradual peak in unmarried births in the early 1990s rather than the steep increase noted in 1994. Ventura, S. J., & Bachrach, C. A. (2000). Nonmarital childbearing in the United States, 1940–99. *National Vital Statistics Reports*, *48(16)*, 2.

[13] See Appendix A for a list of federal and state program goals and requirements for programs funded under Section 510(b).

[14] Pastor, P. N., Makuc, D. M., Reuben, C., & Xia, H. (2000, August). Chartbook on trends in the health of Americans: Health, United States 2000. Hyattsville, MD: National Center for Health Statistics.

[15] Kaufmann, R. B., Spitz, A. M., Strauss, L. T., Morris, L., Santelli, J. S., Koonin, L. M., & Marks, J. S. (1998). The decline in U.S. teen pregnancy rates, 1990–1995. *Pediatrics*, *102(5)*, 1141–1147.

[16] Mohn, J. K., Tingle, L. R., & Finger, R. (2003). An analysis of the causes of the decline in nonmarital birth and pregnancy rates for teens from 1991–1995. *Adolescent and Family Health*, *3(1)*, 39–45.

[17] Pastor, P. N., Makuc, D. M., Reuben, C., & Xia, H. (2000, August). Chartbook on trends in the health of Americans: Health, United States 2000. Hyattsville, MD: National Center for Health Statistics.

[18] *Ibid.*

[19] *Ibid.*

[20] Ventura, S. J., Mathews, T. J., & Hamilton, B. E. (2002). Teenage births in the United States: State trends, 1991–2000, an update. *National Vital Statistics Reports*, *50(9)*, 1–4.

[21] See for example, http://www.childtrends.org/PDF/FAAG2002.pdf.

[22] www.hs.state.az.us/plan/teen01/text2001.pdf.

[23] The Arizona Abstinence Only Education Program Evaluation Annual Reports are available from the Arizona Department of Health Services, Office of Women's and Children's Health for years 1999, 2000, 2001, and 2002.

[24] The evaluation of the media campaign in Year 3 and Year 4 of the program was presented in separate reports from the evaluation of the targeted programming: LeCroy & Milligan Associates, Inc. (2002). *Abstinence Only Education Program media and public relations campaign evaluation report June 2002.* Phoenix, AZ: ADHS, Office of Women's and Children's Health; LeCroy & Milligan Associates, Inc. (2001). *Abstinence Only Education Program public relations campaign evaluation June 2001.* Phoenix, AZ: ADHS, Office of Women's and Children's Health.

[25] Focus groups were held in metro Phoenix, metro Tucson, rural Pima County, southeastern Arizona, and the southwestern border region of Arizona.

[26] Kirby, D. (2001). *Emerging answers: Research findings on programs to reduce teen pregnancy.* Washington, DC: The National Campaign to Prevent Teen Pregnancy.

[27] Mann, J., McIlhaney, Jr., J., & Stine, C. (2000). *Building healthy futures: Tools for helping adolescents avoid or delay the onset of sexual activity.* Austin, TX: The Medical Institute for Sexual Health.

[28] Factors that influence the success of collaborations formed by nonprofit organizations, government agencies, and other organizations are for example: a history of collaboration or cooperation in the community, collaborative group seen as legitimate leader in the community, favorable political and social climate, mutual respect and understanding, appropriate cross section of members, members see collaboration as in their self interest, ability to compromise, development of clear roles and policy guidelines (source: Mattessich, P. W., Murray-Close, M., & Monsey, B. R. (2001). The twenty success factors. *Collaboration: What Makes it Work* (2nd edition). Saint Paul, MN: Amherst H. Wilder Foundation.

[29] The program started in August 1998. Year 1998 (Year 1) numbers are from August 1998 to March 15, 1999. Year 1999 (Year 2) is from March 16, 1999 to December 31, 1999. All other numbers are reported for calendar years.

[30] Precision of estimate computation involves computing a 95% confidence interval around the standard error of a percentage or proportion, and then examining if the interval associated with the largest *N* falls within the intervals associated with smaller *N*s. Where no overlap exists, the difference is statistically significant at the 0.05 probability level.

[31] Numbers of youths represented in the school/after-school/community population for Figure 3.3 were: Year 1 = 1,478, Year 2 = 4,115, Year 3 = 8,450, and Year 4 = 11,785. Numbers of youths represented in the probation/residential/detention population for Figure 3.3 were: Year 1 = 112, Year 2 = 657, Year 3 = 553, and Year 4 = 433.

[32] The correlation coefficient for school-based preteens was $r = -0.06$, $p = 0.000$, after-school and community participants was $r = -0.08$, $p = 0.009$. For school-based teens there was a small but significant positive correlation between total number of contact hours and percentage of the program attended ($r = 0.02$, $p = 0.014$).

[33] Matching post-tests to pre-tests to determine dropout is likely to provide an upper-bound estimate of dropout, as some contractors reported a challenge in getting youths to fill out the surveys.

[34] Teen participant characteristics included were: religiosity, free lunch status, grades received in school, number of parents in the home, currently dating, sex education, birth control, or abstinence-only class before, how interested they are in abstinence, nonsexual risk behaviors, pro-

social behaviors, sexual intercourse, consider being a teen parent, and baseline values on all intermediate outcome variables. Preteen characteristics were similar, except they were not asked about intercourse. To protect against alpha slippage, a Bonferroni correction was applied to the final model, and only those variables meeting the more stringent criteria are reported ($p < 0.05/12 = 0.004$).

[35] Donahue, M. J. (1987, September). *Promoting abstinence: Is it viable?* Paper presented at an Office of Adolescence Pregnancy Programs technical workshop. Washington, DC.

[36] Christopher, F. S., & Roosa, M. W. (1990). An evaluation of an adolescent pregnancy prevention program: Is "just say no" enough? *Family Relations*, *39*, 68–72.

[37] Santelli, J. S., DiClemente, R. J., Miller, K. S., & Kirby, D. (1999). Sexually transmitted diseases, unintended pregnancy, and adolescent health promotion. *Adolescent Medicine, 10(1)*, 87–107.

[38] Devaney, B., Johnson, A., Maynard, R., & Trenholm, C. (2002). The evaluation of abstinence education programs funded under Title V Section 510: Interim report. Washington, DC: U.S. Department of Health and Human Services, Division of Children and Youth Policy.

[39] Strouse, J. S., & Fabes, R. A. (1987). A conceptualization of the transition to nonvirginity in adolescent females. *Journal of Adolescent Research, 2*, 331–348.

[40] For further detail see LeCroy & Milligan Associates, Inc. (June , 2002). *Abstinence Only Education Program Evaluation Report*. Tucson, AZ: Arizona Department of Health Services, Office of Women's and Children's Health.

[41] Donahue, M. J. (September, 1987). *Promoting abstinence: Is it viable?* Paper presented at an Office of Adolescent Pregnancy Programs technical workshop. Washington, DC.

[42] Christopher, F. S., & Roosa, M. W. (1990). An evaluation of an adolescent pregnancy prevention program: Is "just say no" enough? *Family Relations*, *39*, 68–72.

[43] A second analytic approach, between-group analysis, was intended, but due to design limitations is not reported. The intent was to compare the Abstinence Only Education Program participants at follow-up, first, to a sample of teens who had no sex, birth control, or abstinence education and, second, to a group of teens who had sex or birth control education but not the Abstinence Only Education Program. As there was no comparison group, an attempt was made to construct post hoc comparison groups from the pre-test data. Several factors prohibited a valid comparison. The most problematic of these, in addition to the restricted follow-up sample, were 1) constructing a dependent variable that was consistent between the treatment and comparison group and 2) the inability to control for prior sexual experience in the pre-test data. In the within-group analysis, prior sexual experience had the greatest predictive efficacy in terms of subsequent sexual behavior. Any conclusions from a comparison group analysis with these limitations would be error ridden. In effect, no amount of statistical wrangling can compensate for design limitations.

[44] Other variables, not significant, but controlled for in the equation were: ethnicity, age, gender, previous risk behaviors, religiosity, prior abstinence education, number of parents, usual grades, desire to have a child soon, talking to parents about sex, number of children, program dosage, time between the program and follow-up, short-term outcomes at post-test (subjective norms, health and value reasons to abstain, refusal skills, decision making, attitudes toward abstinence) and abstinence activities (calling the hotline or accessing the abstinence website, joining a club, signing a pledge; attending a play, retreat, or summer camp, counseling, and mentoring).

[45] Two problems exist with the use of free lunch eligibility as a proxy for socioeconomic status. First, the participant survey did not differentiate between those with free versus reduced-price meal benefits. Second, free meal benefits may be a better indicator of the general economic status of a geographic area, as opposed to an individual family's economic status. This is because different provisions of the Free and Reduced Price Meal Programs have different participation requirements, operate on different eligibility verification cycles, and use different application processes. Under some provisions, schools can provide free meals to all enrolled children regardless of parental

income. For reference, see *Special Assistance Guidance Manual for the National School Lunch and School Breakfast Programs 2000-2001*.

[46] For greater detail see LeCroy & Milligan Associates, Inc. (June, 2002). *Abstinence Only Education Program Evaluation Report*. Tucson, AZ: Arizona Department of Health Services, Office of Women's and Children's Health.

[47] Chi square results for Year 2 (X^2 = 12.9, df = 2, p = 0.002); Year 3 (X^2 = 8.2, df = 2, p = 0.017); Year 4 (X^2 = 10.8, df = 2, p = 0.005).

[48] Devaney, B., Johnson, A., Maynard, R., & Trenholm, C. (2002). *The evaluation of abstinence education programs funded under Title V Section 510: Interim report.* Washington, DC: U.S. Department of Health and Human Services, Division of Children and Youth Policy, p. 19.

[49] Cheng, M., & Udry, R. (2003). How much do mentally disabled adolescents know about sex and birth control? *Adolescent & Family Health, 3(1)*, 28–38.

[50] Slicker, E. K., & Thornberry, I. (2003). Older adolescent well-being and authoritative parenting. *Adolescent & Family Health, 3(1)*, 9–19.

[51] Year 4 data revealed 1,898 sexually experienced youths at pretest, of these 1,297 planned to continue having sex and 601 planned to stop having sex (secondary virgins). Of the 601 secondary virgins, 523 remained secondary virgins at posttest and 78 planned to have sex again. Of the 1,297 who planned to continue sex at pretest, 273 became secondary virgins at posttest, and 1,024 still stated their intentions to continue having sex.

[52] The number of children represents a duplicated count; available data provides no way to calculate how many children received the program more than once.

[53] See for example, Battjes, R. J., Onken, L. S., & Delany, P. J. (1999). Drug abuse treatment entry and engagement: Report of a meeting on treatment readiness. *Journal of Clinical Psychology, 55(5),* 643-657; De Jong, P., & Berg, I. (2001). Co-constructing cooperation with mandated clients. *Social Work, 46*, 361-374; Goldapple, G. C., & Montgomery, D. (1993). Evaluating a behaviorally based intervention to improve client retention in therapeutic community treatment for drug dependency. *Research on Social Work Practice, 3,* 21-39; and Miller, W. R., Benefield, R. G., & Tonigan, J. S. (1993). Enhancing motivation for change in problem drinking: A controlled comparison of two-therapist styles. *Journal of Consulting and Clinical Psychology, 61,* 455-461.

[54] Low response rates in years 1 through 3 of the program may render the satisfaction data unreliable; therefore satisfaction findings are not reported for these years. Missing data in years 1 through 3 was 40% or more.

[55] The percentages displayed in Figure 5.1 were calculated by aggregating the positive responses of *very*, *somewhat*, and *a little*.

[56] In Year 4, a total of 2,636 teens in grades 7 and 8 responded to the children's survey; these responses are not included in this analysis because of the differences in questions on the teen and child surveys. The percentages displayed in Figure 5.2 were calculated by aggregating the positive responses.

[57] See for example, Olsen, J., Weed, S., Nielsen, A., & Jensen, L. (1992). Student evaluation of sex education programs advocating abstinence, *Adolescence*, *27*, 369–380; and Herold, E. S., & Goodwin, M. S. (1981). Adamant virgins, potential nonvirgins and nonvirgins. *The Journal of Sex Research*, *17*, 97–113.

[58] Statistically significant between-group difference determined by one-way ANOVA, F = 26, df = 2,
p. = 0.000.

[59] The number of parents receiving the Abstinence Only Education Program were: Year 1 = 81, Year 2 = 430, Year 3 = 283, Year 4 = 185, and Year 5 = 127.

[60] Percentages were calculated by grouping positive responses.

[61] The numbers of high-risk adults reporting in each year were: Year 1 = 49, Year 2 = 142, Year 3 = 146, Year 4 = 230, and Year 5 = 524.

[62] The urban/rural distinction for each school location was defined by a population total of greater than or less than 50,000 people, excluding certain suburbs of Phoenix that were counted as urban.

[63] Bushman, B. J., & Phillips C. M. (2001). *If the Television Program Bleeds, Memory for the Advertisement Recedes*. American Psychology Society.

[64] See Appendix D for a description of each television ad, target audience, and release date.

[65] Cumulative number of contacts with the toll-free hotline were: February 28, 1999 = 325; December 31, 1999 = 947; December 31, 2000 = 1,343; December 31, 2001 = 1,938; and December 31, 2002 = 2,620. Cumulative number of contacts with the website were February 28, 1999 = 423; December 31, 1999 = 1991; December 31, 2000 = 398,883; December 31, 2001 = 976,271; and December 31, 2002 = 1,852,030.

[66] See Appendix D for a description of each television ad, target audience, and release date.

[67] Donahue, P. L., Voelkl. K. E., Campbell, J. R., & Mazzeo, J. (1999). *NAEP 1998 Reading report card for the nation*. Washington, DC: Department of Education.